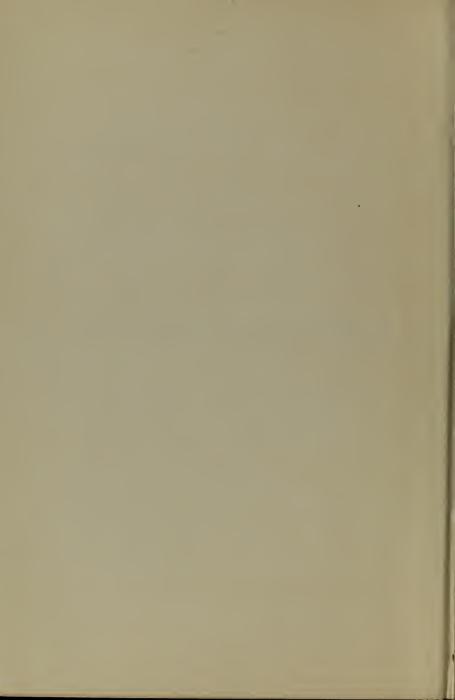


HANDSPRINGS FOR HAMBURGERS



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The Life of a Gypsy Flier

BY

LESLIE C. MILLER



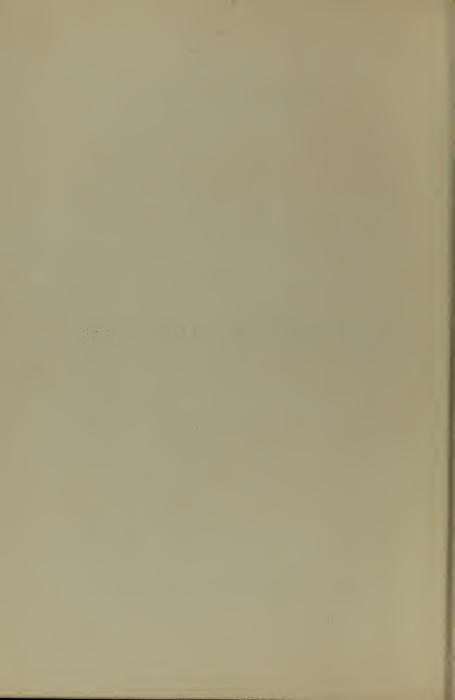
Edited by
KEN MAYNARD

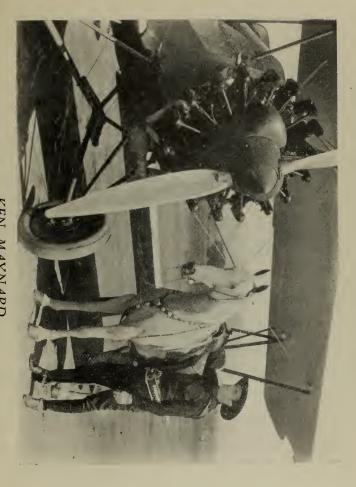
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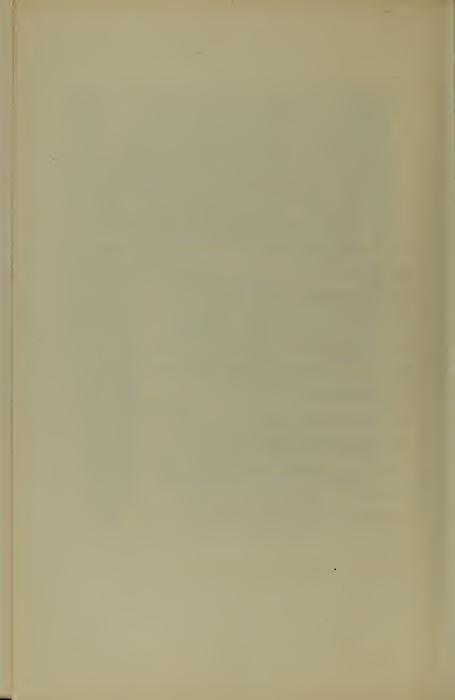
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HANDSPRINGS FOR HAMBURGERS





KEN MAYNARD
With bis famous borse, Tarzan, and bis Whirlwind Travelair



FOREWORD

Forewords have always reminded me of introductory speeches by florid gentlemen with gold bow-rimmed glasses, a sheaf of memoranda, and wilted celluloid collars, at whose right hand always stood a glass of water frequently used by the loquacious speaker, standing behind the red, white and blue buntingbedecked dry goods box as he expounded vociferously the many, many virtues and outstanding, chaste characteristics of the great dignitary who was about to address the mob assembled, and who usually stood close to the gentleman with the bow rims and mopped a clammy brow and smiled and blushed at the members of the Ladies' Auxiliary.

However, in view of the fact that I am accredited with the editing of this book, I feel some explanation is forthcoming, since it is a far cry from spurring a pony up and down these California pinnacles to the editing of books pertaining to that most modern means of transportation yet invented by man—the airplane.

I am, to begin with, a civilian flier. That is, I am interested in aviation and its progress only through sheer love of flying, and my appreciation of the latter-day airplane and its amazing progress is possibly very much akin to the feeling of a sportsman about his pack of hounds, his pole horses, race horses, the newest niblick or mashie, speed boats or a stripped Ford.

I own no airplane stock and am in no way

financially interested, so that anything I think or say regarding this "sport of the gods" can be unbiased and without prejudice toward any particular plane or company.

To me, there is no more thrilling or invigorating action in all this world than flying your own airplane far above the din and racket of the cities or the green fields of the country, where quiet, except for the steady purr of your faithful engine, reigns supreme. There are new worlds to conquer up there, beautiful cumulus clouds throwing shadows as from giant mountains, or strato-cumulus covering miles of the skyway, billow after billow of waving rolls of dark lather penetrated here and there by ragged blue holes where, perhaps, far below through this small aperture, may be seen fleeting glimpses of the fields and

cities of our earth-bound fathers, who could not in their day know such thrills, days when any youth taken with such fancies was looked upon much as a lunatic at large, or a specimen of the "genus homo" who had been visited with a dire attack of "what ailed him."

Things have been happening, though, since the days of Kitty Hawk, and through the efforts of those old barnstorming aviators who were the first great pioneers of the air, this impossible thing of a decade ago is now fact. Pioneering in any age has been fraught with peril, loss of life, hardships without number, disillusionment, heartaches, reverses, and in the end success, sadly leaving many to fall by the wayside in the folly of endeavor who are destined never to see the accomplishment they paid so much to gain.

Millions of words have been written about aviation, scores of magazines devoted to the business find their way to the news marts of the world, text-books by all recognized authorities, pamphlets on gliders or the assembling of home-made planes, science and invention, and numerous historical volumes regarding remarkable flights and exploration, but in the mad rush of the hour the old Gypsy Flier who made all this possible has been sadly neglected. These are the men who, having contributed so much, are now forgotten and, like the abandoned mining towns and ghost cities of the West you find them—and they can tell you tales that send a chill up your spine, and spin yarns of peril that fairly raise the hair from the head. When one understands the terrible handicap they flew under, with poor and unworthy equipment, it almost brings a blush of shame to a young flier who now sits back in a fine, upholstered airplane, with blind flying instruments, and controls that a child could handle, in an almost fool-proof piece of mechanism traveling through the air with more than twice the speed they attained, and with hardly a care in the world as to the perfect purring motor under the streamlined cowling.

Leslie C. Miller is one of these old-timers, these "Gypsy Fliers" of the past, although a power of the present in circles of aviation. He is known throughout the country as an authority on the modern airplane engine and as a capable pilot, whose columns devoted to talks on engine trouble are eagerly read by the airminded when they appear in various maga-

zines. Hero of a thousand thrills and one to whom the industry owes a niche in the annals of flight, I can think of no one more capable of telling the story of the old-time barnstorming days, and while I am going to keep a promise I made, I can assure you he knows more about Billy MacDowell, the hero of this book, than any living person, but then, he is like all those emigrants of the air, a retiring, modest man.

From time to time in our acquaintance, he told me adventurous happenings of Billy Mac-Dowell, and as I pumped him for stories of the "Gypsy Flier," I mentally vowed the public should also hear them. I felt there must be thousands just like me who would be interested in them and that it would fill a long-felt need to those who love airplane litera-

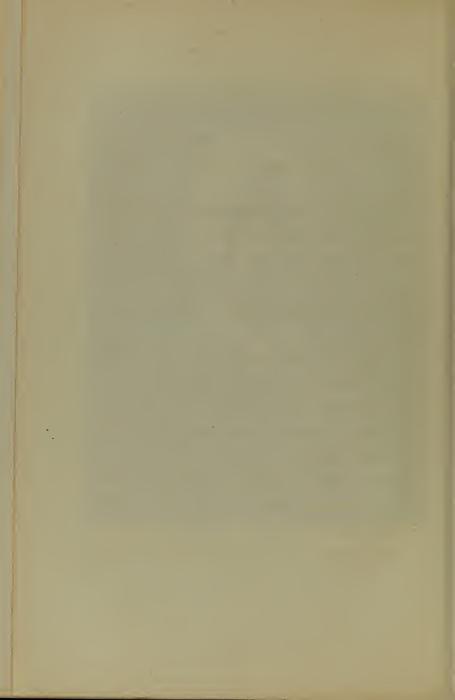
ture. He could see nothing to rave about in them, so he said, nor anything that should interest the public. Besides, he said, he was no writer. Well, I'll leave that to you, for I virtually drove him to put these stories of Billy down on paper, after promising to see to the editing of the finished book. He didn't need me, but I believe that everybody air-minded needs the book, so that if I have contributed anything at all, physically or mentally, toward its final publication, I feel my time has not been wasted.

So, wishing you many happy landings, I am sincerely,

Law Maynard



LESLIE C. MILLER
Author



INTRODUCTION

"Handsprings for Hamburgers" portrays the typical and actual experiences of "Gypsy Fliers" during the early years of aviation in America, and the final success of one of them as the airplane began latterly to come into its own.

Perhaps this story could have been written before, but it was considered impractical to deal with the facts it contains until the time had arrived when it could honestly be said that over ninety per cent of the hazards mentioned in "Handsprings for Hamburgers" had been eliminated. How this has been done will be explained later on in this introduction.

During the last twenty-four months, avia-

tion has made greater advancement than during the other ten years of the past decade. Until the time of the meteoric rise of the airplane industry, however, many years of sacrifice and hardship on the part of the oldtimers were necessary to acquaint the public with the merits and beauties of the airplane. "Gypsy Fliers" the old-timers were, roving by air from one hamlet to another, carrying passengers for their first trip into the clouds and making converts wherever they went to the cause of aviation. Since the war thousands upon thousands of hitherto earth-bound people have made their first acquaintance with the airplane in this manner. And most of them have become permanent enthusiasts.

Back of this missionary work of the "Gypsy Flier" is a story which, told about one of the

boys, could be said of them all. Many have been sorely tempted through the years to give up the unequal battle and quit. But the love of their profession, their ideals and hopes of the future would not permit them to give ground, and they went on and on, always believing that the next year would see the airplane come into its own.

Another feeling, of which little has been written, gave them added courage to combat the many obstacles they encountered. This was the feeling of pure unadulterated patriotism that animated them all.

Every flier, whether young or old, realized from the very start the meaning of the airplane in time of strife. Some of the oldtimers and war pilots tasted of its possibilities during the World War, and one and all will say with complete conviction that the next war, which we hope will never come, will be fought to an overwhelming degree in the air, and that in its battles thousands upon thousands of airplanes will play a leading part. Men and guns on the ground will be just about as important as popguns and wooden soldiers. There will be no battle-fronts as in past conflicts, when the best blood of our nation stemmed the tide of the onrushing hordes that they might not reach our loved ones.

Lest America awaken some day to the sound of enemy bombs dropping in the very door-yards of its citizens, with no means of protection or retaliation, the handful of "Gypsy Fliers" struggled on and on, year after year, fighting to instill the spirit of

aviation in the minds of Americans that there might be more planes and, consequently, more pilots, who in time of national emergency could be called to man this great instrument of defence.

Public interest, as always, was hard to stir up, however, and it was not until the Roundthe-World Flight by our United States Air Service ships that America really sat up and began to take notice. Aviation picked up materially during that event and aviators everywhere began to take heart. Now surely the airplane would come into its own----but not yet. It is true that, as a result of that memorable flight, the lot of the aviator became less difficult and he began to find it easier to make a respectable living.

Then "Slim" Lindbergh (God bless him)

took the bit in his teeth and hopped to Paris.

If I live a thousand years, I shall always say that this noble flier did more for his buddies and for aviation in that thirty-six hours' flight than will ever be done in the future by any single individual. Prior to his flight, the only references made by most newspapers regarding aviation were in such scare headlines concerning the accidents as: "AIR-PLANE CRASHES ---- AVIATOR PASSENGERS KILLED:" "AIRPLANE BURSTS INTO FLAMES----PILOT BURNS TO DEATH." These articles were always accompanied by pictures and morbid details, but seldom was the real story back of the accident told. No reference was made to the possibly obsolete, patched-up condition of the planes. No pains were taken to ascertain

whether or not the aviator was sick and unfit to be flying, though still battling toward the day when he would receive the kind of public co-operation that would enable him to procure adequate modern equipment.

The turning of the tide came with the Lindbergh flight. The enormous and favorable publicity that followed, and the realization by the press of what aviation really could mean, resulted in the discovery that this neglected part of our modern life could be much further advanced by digging out the facts of every accident and dwelling upon the merits and possibilities of the airplane, rather than by collecting and printing the morbidly sensational details of such unfortunate catastrophes.

The change in the attitude of press and public has been radical and rapid.

America is becoming more and more airminded every day. The constantly increasing demand for planes has enabled factories and their engineers to carry on more extensive research, with the result that airplanes and motors have in a ridiculously short time been improved to the point where they compare in reliability and simplicity of control with any motor car.

The amount of ground space required for taking off and landing has been reduced to a fraction of what it formerly had to be. Since the inception of the Aeronautic Department of Commerce, every plane is built today to the requirements of that department, as to strength and reliability of performance.

In addition, hundreds of cummunities have put their shoulders to the wheel and established landing fields, for which there was such a need in the old days. The Federal Government itself has located fields in the "bad lands" at reasonable intervals where we once used to land among the trees or rocks in the event of trouble. Today the pilot starts out on his trip with complete knowledge of the weather conditions ahead, thanks to the Government Bureaus, and, by using his airway maps, he knows full well where he may land enroute in the event of trouble, or to await the clearing of the weather.

Citizens desiring to travel by plane now have the assurance that the pilot of their ship has demonstrated his fitness for his job to the Aeronautics Department or he would not be flying. In the old days, any kind of pilot could fly, any style of pre-war junk-heap anywhere. When he started on a trip he took all sorts of chances on the weather, and the possibility of having to find some place to land enroute in the event of trouble. As often as not, finding an adequate landing spot at his destination was a matter of pure luck.

In publishing "Handsprings for Hamburgers" it is the writer's conviction that flying today in modern airplanes equipped with their many safety devices is as safe and, in many respects safer than other modes of transportation. It is also the writer's opinion that any person of average health and intelligence can, in a short time, operate his own ship with ease and safety.

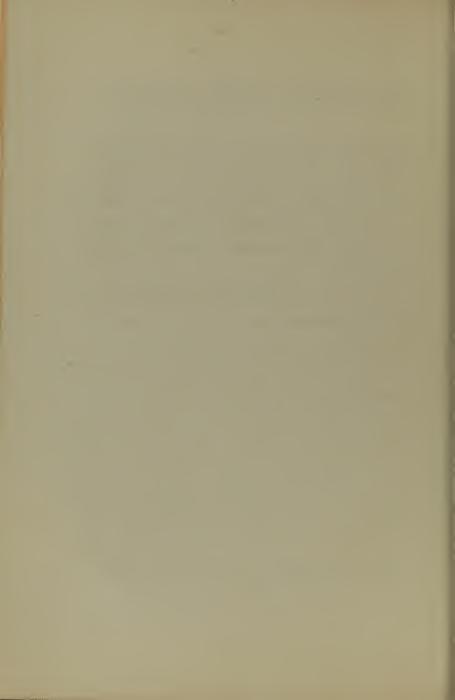
To demonstrate this is, perhaps, the prin-

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cipal reason why I have prevailed upon Billy McDowell to tell his own story as a "Gypsy Flier" in his own words. He is, without any question, the outstanding example of the truth of my statement in the world of aviation today.

LESLIE C. MILLER.

Hollywood, California.



ONE

Way back in 1913 I (Billy McDowell) was teaching automotive and electrical engineering at a little college in my home town.

I was one of those chaps who took work home every night. I had a lot of notions, kind of an inventor; always experimenting with something or other that no one else understood or cared about; after I found out that my experiment would work, there was always some other mechanical notion to attract my attention.

Because of my inventive turn of mind and

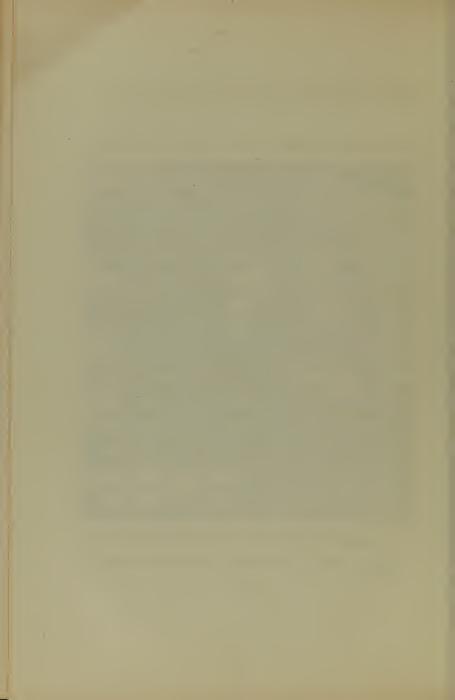
lack of interest in anything other than mechanical I was regarded as a harmless and not very ambitious sort of a fellow.

Teaching was beginning to get on my nerves. I secretly dreamed of some day accomplishing an objective that would gain for me recognition, which no one but myself had confidence I possessed. Flying at that time was only the privilege of extraordinary humans like Beachey, Art Smith, and a few others who captured the front page of all the newspapers wherever and whenever they exhibited.

As I plugged along at college, there slowly sifted through my mind, almost as imperceptively as the sand through an hour glass, the thought that possibly here was an avenue of escape from the humdrum life at college.



Lincoln Beachy in a Curtiss Pusher



And yet the thought, when it first occurred to me, caused a whimsical smile to spread over my face, and then grave misgivings displaced it.

I wondered if I would have the nerve to fly if the opportunity ever presented itself. It is laughable to recall now the first time I ever mentioned the possibility of my learning to fly.

My Dad and I were sitting on the veranda at home one Sunday afternoon, and in running through the newspaper I read the announcement of Lincoln Beachey being signed up to fly at the state fair in our town that fall. Handing the newspaper to my father, I hesitatingly stated:

"Dad, I would like to learn to fly."

"You what?" my father said as he stared

at me over his glasses. "Now I know you're crazy, Billy McDowell!"

And as though he believed my statement was the result of just an idle thought the old gentleman turned his back and continued to read his paper.

"H-m-m! Guess Dad don't think I could," and then I dropped the subject.

However, that fall of '13, when the state fair opened and Beachey was making his first flight I was sitting in my old chain drive Buick on the top of a knoll, watching Beachey go through his antics for the benefit of the visitors at the fair. I heaved a deep sigh and wondered whether I would ever have the nerve to get up into the air. Just then Beachey finished a loop that sent my heart into my throat.

"Boy, that man has nerve." Then down, down straight at me the flier came until it took all the nerve I had to keep from crawling under my car. As Beachey straightened out and swooped with a roar over my head he waved and grinned and then zoomed back into the air. Of course I was not over-enthusiastic with the stunt, still right there is when the flying bug finally got me, and from that day on for the next two years I bought every book that even mentioned aviation. Many times the purchase of a new book on airplanes meant the postponement of something else I needed, especially as I was trying to save every dime, to engage an instructor to teach me to fly.

Eventually I had saved enough out of my meager salary to buy a wrecked plane over in

Ohio, which was shipped back to the college in the summer of '15, and after rebuilding it with the help of the students the ship was put on the field and ready to fly.

All through the months during the time the plane was being rebuilt I was worried with the question of how I was going to get an instructor, which had been my original idea, and as the ship neared completion this thought grew to be a momentous one. My goal was so near attainment, however, that nothing short of an earthquake could have stopped me.

When the ship finally set on the field ready to go I was flat broke and instructors at that time demanded any sum that happened to occur to them when it came to helping a beginner get on to the ropes.

The Ship was a Curtis Pusher, one in which

the pilot sat in a bucket seat out in front on a framework, with nothing ahead or below him but the wide world, and with the engine located immediately in back of the seat all ready to send the pilot to glory in the event of a crash or bad landing, while in present day ships a bad landing would only result in possibly a broken landing gear, but in these, the old days, death was a hundred to one shot.

My father owned three eighty-acre patches of smooth ground laying end to end, and after much persuasion, I gained the old gentleman's permission to take down the fences between them which made nearly a mile runway, to start practicing on.

Adopting the old time French method of learning to handle the ship on the ground I first marked a line the length of the field after which the embryo pilot would taxi up and down the line day after day until I was skillful enough to keep the wheels a-straddle of this line. The main problem for the first few days appeared to be to even get near this objective. First the ship would go off on one side and head for the fence, then I would get out and lift the tail around in the direction of the line and start out again, only to roll wildly clear over it and stop just short of ruin in a tile ditch on the other side.

The only time I could find to practice was early in the morning, from daybreak until school time and at night after work until dark. Weeks of practice rolled by before I was able to complete the round trip down the line clear to the end of the field and turn back on the line to the other end. I was just about as

proud of accomplishing this much as the present-day student flier is of his first solo flight.

After mastering the ship on the ground the next step was skipping. This meant that I would open the throttle and run down the field until flying speed was attained, then the ship would be allowed to rise a foot or two, then shutting down the motor, come back to the ground before reaching the end of the field.

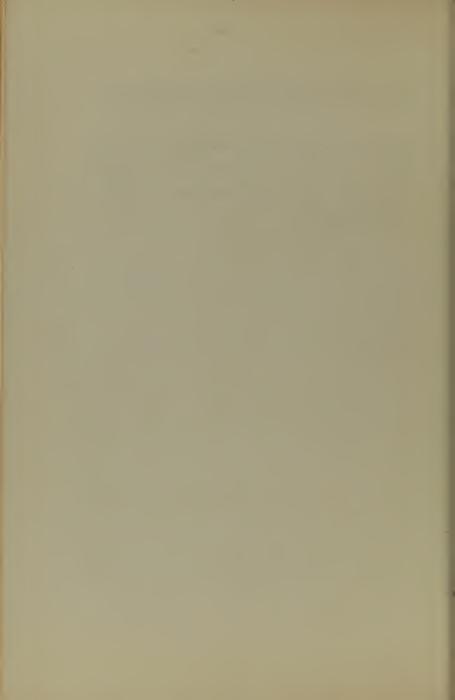
Bowling down the field one morning I had made about half the length of it and the wheels were just leaving the ground. I had not progressed to the point where I could nerve myself for the first full flight and the air had been still as night when I had started out. However at this moment a gust hit the ship and before I knew what was happening I was

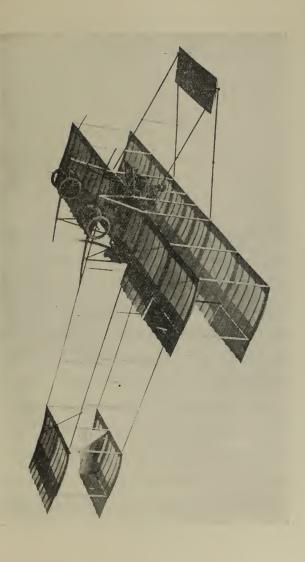
looking down from the level of the tree tops. My heart naturally missed a beat or two and the end of the field was too close to try landing so my only salvation lay in continuing on and around to the starting point. In a great wide flat turn I made the circle while one fear-some thought after another chased through my brain. Could I make a landing? Finally I was squared away with the full length of the field before me.

Lower and lower I flew until the fence flashed by. As I passed over it I cut the switch and waited for the ship to settle closer and closer to the ground. The grass beneath me passed in a blur, but as the speed diminished the blur changed to definite wisps and patches which I knew meant flying speed was no longer being maintained. Softly the wheels

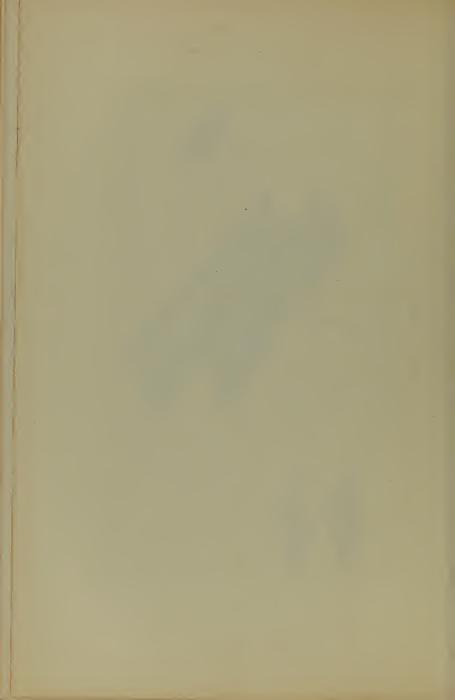
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touched the ground with hardly a jar, and, rolling to a stop, I stepped to the ground barely able to believe my first flight had ended so successfully.





Louis Paulbam in a 1910 Farman



TWO

From that morning I had full confidence in my ability to fly and many flights were made before school time. Like many others I had dreams of fame and fortune, so much so that the faculty got the same idea the townspeople had----Billy McDowell was a nut, after which I was out of a job. But the job could not hold a candle to my prospects with the ship, so the balance of that season and most of the next was spent in exhibition flying which helped to provide the two things in life I was interested in----food and flying.

Soon the war broke out and I promptly got into it. Again the dreams of fame; but any one who knew anything about flying in those days usually found himself stuck on a training job for the duration of the war, while his students went to France to cover themselves with glory and all too often, with blood and wreckage. Then came the Armistice and I was out of the service.

Now to the Golden Harvest! Surely the public would look favorably on flying. Hieing to Canada I bought a plane from the Canadians. This ship was known as a "Canuck," rather weak in the tail surfaces but for those days, a good flying outfit. With a particular idea in mind, I headed first for my home town with the ship.

During the war I had been referred to by

my cadets as "Mild Bill," however, I packed an awful memory and my first passenger at home was Dean Burns, who had so unceremoniously relieved me of my job before the war. Of course, the Dean was unaware of how I had felt about that incident, but when I landed after the flight the Dean was lifted out of the seat and laid on a convenient board while I brought a pail of water to wash out the passenger's cockpit. Loops, spins, barrelrolls, and what-not had accomplished my aim of leaving something for the Dean to remember me by. When the ship was again clean I remarked that I didn't believe business was going to be so good around there so I sailed out for more congenial fields.

During 1919 I did pretty well. There were enough adventurous souls who wanted the

thrill of an airplane ride that it wasn't much of a trick to pick up quite a bit of passenger money, to say nothing of many exhibition contracts. As my money came easy it went much the same way, and at the close of the season I was only fairly well fixed financially and the ship needed rebuilding.

The winter months were passed in Texas, and for the first time in my experience I had plenty of competition. Other fliers had conceived the idea of wintering there also. Gradually it got to the point where, to get an exhibition contract, it was necessary for fliers to do some tall thinking to figure out a new stunt which would be more attractive than that of some other fler.

It was in the spring of '20 when I coined the expression "Handsprings for Hamburgers." Meeting a friend in Houston and replying to the question of what I was doing then, I remarked that I was still "turning handsprings for hamburgers," meaning I was bringing in the where-with-all to eat and live by looping, spinning, rolling or anything else that would send the blood rushing through the veins of my audiences who were willing to pay good money for such exhibitions. The crowds enjoyed the possibility that the renowned "loop king," as I was billed, might make a miscue and spill my anatomy over the landscape. Anyone of them asked about such a thought would have looked horrified and denied the allegations, but just the same, the tougher the stunt advertised the greater would be the crowd.

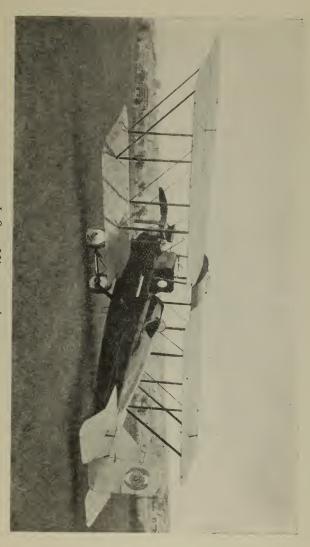
In '21 it got to the place where almost nothing less than the promise of a killing would interest the fair boards. By this time the price of passenger hops had dwindled to a much smaller amount than formerly and it was necessary to work twice as hard to keep the wolf from the door. Aviators had to eat and naturally competition was pretty keen. It was not long until stunts which had pulled \$500 for one day's work did well to draw \$100, and as stated before, the stunt had to be good, in fact, so good that many a flier gave up the fight and quit rather than keep on with the prospect of figuring eventually in a headline news story of the untimely end of an aviator. However, I decided to stick it out regardless, as I figured in less than another

year the public would be more air-minded and I would clean up.

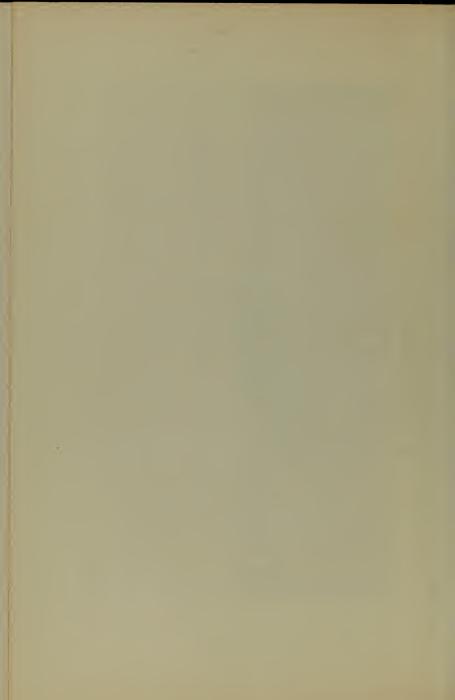
Things were pretty tough by the spring of '22 and having heard of the boom then starting in Florida, I decided that would be a virgin field to try out. So one fine day found me and my ship passing over the edge of Okefinokee Swamp in southeastern Georgia on the way to Jacksonville. The direct route lay immediately over the middle of the swamp which was sixty miles long and forty miles wide. Weird stories had been circulated during my school days of the wild life of this famous swamp and it was a great temptation for me not to fly down low over its interior for a sight of some of the swamp's secrets. However, the main business at hand on my first trip to Florida was to get there with the least

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delay in order that I might start padding the larder, which had been badly depleted by the long trek from the middle west.



L S 5, Vintage of 1922



THREE

Arriving at Jacksonville I found that the conditions there were not as rosy as expected, but I succeeded in picking up a contract to carry newspapers back and forth between there and Atlanta, Georgia. The trip was not a long one but the type of ship I was flying made it a pretty slow job.

The first week or two I continued to go around the edge of the swamp, even though it meant about fifteen miles more flying. Still, motors were pretty fickle in those days and we did well not to trust them too far.

As the weeks rolled by, however, I would unconsciously cut in more and more over the swamp until finally on a return trip from Atlanta, flying at six thousand feet, I was looking down from about the geographical center of the great swamp and mentally wondering what a pilot would do in the event of motor trouble. As though the motor was anxious to relieve my mind on the subject, it expired without warning.

An airplane could glide even in those days for considerable distance from six thousand feet, but it was fully twenty miles to an open spot where a plane could be landed, and as far as my eyes could reach there was nothing but tall trees and swamp.

Circling desperately I swept the surrounding country for a spot, regardless of what it might be, where I could get to the ground without first crashing into the trees. As I lost altitude, I made out what appeared to be a possibility in the way of a tiny little yellow patch immediately below.

Until I got close to it I was not positive that it would be humanly possible to even pancake into it.

When down to a thousand feet I decided that luck for the moment at least was with me as the spot appeared to be a grassy opening probably two hundred feet square yet boxed in on all sides by high trees.

The only possible chance of reaching the ground before crashing into the trees, would be to spiral down towards the opening until I was below the level of the tree tops and then stall the ship in mid-air a few feet off the

ground and try to pancake, or rather, settle vertically.

I had long since given up any hope of saving the ship and my main thought was to get down uninjured. Plenty of time would be left later to figure out the way to civilization.

Lower and lower I spiraled, and when the right moment came I reversed the controls and waited for the impact.

As the ground rushed up at me I figured that I was going to make it, but instead of the jolt expected when the wheels touched the ground, I was surprised to see it give way amid a shower of mud and water.

What had appeared to be solid ground covered with grassy vegetation was a floating island, and the ship sank clear to the wings before it stopped.

Here was a situation I was little prepared to cope with.

Stepping out of the cockpit on to the wing, I gingerly placed my foot on the crust of decayed vegetation and tested its strength by intermittently allowing my weight to rest on it.

As I stomped thusly, I was half amused to notice little puddles of water rise from below the surface of the matting forty and fifty feet away.

Looking back into the trees I could see nothing but water and slime and wondered if the stories were true that I had heard about the snakes, alligators and other reptiles that were supposed to abound in the dismal shadows.

Well, sitting there was not going to get me out, so I began to draw upon my resources, as

any aviator would, and started laying a plan by which I hoped to get myself out of this predicament.

I had heard of men falling into quagmires and quicksand and how they had been saved by holding on to planks. As I had no plank I decided to take from the wings one of the big ailerons, or control surfaces, and carry it under my arm. The aileron was approximately ten feet long and twenty inches wide and was a light framework covered with airplane fabric and, as I figured, should very well serve the purpose of a plank if I should happen to need one.

Next taking the compass out of the ship I set it on the ground and took a true course from it to the nearest railroad track. Sighting over the compass I picked out a lone tree back

in the swamp which was to act as a guide post until I had worked my way to that point, after which another guide post would be selected in the right direction, and on and on until the edge of the swamp was reached.

During the time consumed in preparing for the trip I carefully avoided stepping on the ground very far away from the ship so that I could reach it in the event of breaking through the decayed vegetation and into the death-dealing mud which I knew lay beneath it.

It was nearly one o'clock in the afternoon when I finally started out and wondered if anyone would happen to miss me and send ships out in search.

I knew however that even though I might be seen from the air there was no possible chance of them helping me other than by dropping provisions.

Success or failure depended entirely upon me.

As I slowly made my way towards the edge of the floating vegetation each step would send up those bubbles of water on all sides of me which had by now ceased to be amusing.

I was just beginning to congratulate myself on having made over a hundred feet of progress when down I went. The matting had simply given away like an egg-shell and the mud was trying to suck me under.

Keeping my head, I eased my weight more and more on to the flat surface of the aileron and was finally able to draw myself upon it.

After that I decided there would be less pos-

sibility of breaking through again by rolling towards the trees, always keeping the aileron at my side.

The compass was continually entangling my arms, as it swung from my shoulders by a strap, but I dared not leave it as without it I might wander in circles through the swamp and never get out.

Finally reaching the foot of the trees and picking my way from one root to another I cautiously made the distance to the first guide tree.

Water and slimy mud were everywhere, but so far I had managed to avoid getting into either by using the tree roots as stepping stones.

It was nearly four o'clock when I arrived at the guide tree and, determining to make as much distance as possible before dark, I immediately set the course to another tree as far ahead as I could see.

Two hundred yards ahead and stretching to the right and left of me was an oozy mess that struck chill to my heart. There was no other way but to try to go through it.

Reaching this spot I fearfully took the first step and sank to my knees. Deeper and deeper I sank as I waded into it, always keeping the aileron lying flat on the surface. As it got up to my hips it took all the nerve I could muster to continue on to the tree line at the other side. As I reached the middle I was startled by a great splashing off to my left and I could see the undulations of the muddy surface as I turned towards the noise.

"My God, that must be an alligator," and

with renewed effort I fought my way toward temporary safety on the tree roots.

As I progressed, the mud and slime deepened until it was up to my arm pits and without the aileron I would never have made it.

Although the quagmire was less than a hundred and fifty feet across, the sun had disappeared over the horizon before I finally, with my remaining strength, dragged myself out to comparative safety among the broken branches and roots of the trees.

Horrifying as the thought was, I knew my only salvation lay in remaining there for the night as to attempt to go on in the dark would have meant sure disaster.

Gathering broken limbs, decayed vegetation and anything within reach I built as nearly as possible a bridge among the tree roots on which I lay the aileron and my tired body to await the coming of dawn.

As the darkness engulfed me, despite my fear of the poisonous snakes I knew were around me, I fell into a fitful slumber to be awakened every now and then by terrifying snorts of alligators and the swishing of the water by creatures, the identity of which I could only guess.

Time and again as I shifted my weight on my improvised bed there would be the snapping of a twig that would startle me to wideeyed awakeness.

As the first rays of dawn trickled through the branches of the trees, although chilled to the bone and tired and weary, I eagerly prepared to continue on.

My clothes were now in tatters and thou-

sands of welts were rising all over my body from the bites of the many insects that had feasted on me during the night.

Setting another guide post by my compass I wearily stepped from one root to another.

On and on until my aching legs moved automatically, sometimes missing a step and plunging into the slimy water to again climb out and forge ahead.

I had lost all reckoning of time and it seemed I had traveled a million miles when dusk overtook me and I resorted to the method of the night before of securing a place to lay my agonized form.

Again the horrifying experiences of the night previous set in, but I was so exhausted that even the chilling sounds and the clammy cold could no longer keep me awake.

I had no idea of how long I had been asleep when something awakened me.

Wearily I opened my eyes and from above me came the light of the full moon.

As the memory of my surroundings crept into my tortured brain I thought I felt a movement of something across my knees; waiting a second I became sure that some live object was there.

My heart was chilled to the core for fear that it might be one of the deadly moccasins I had seen slithering out of my path during the daytime. However, I dared not move for fear that whatever it was would turn on me and end the nightmare forever.

Slowly and hardly perceptibly I turned my head until I could see what the object was.

There lying with its body across my legs

was an ugly moccasin, its hideous head poised as though in doubt as to whether to end my miserable existence or to pass on its way.

I would have almost welcomed its bite if I was sure it would mean instant death. However, I knew this would not be the case so I lay still, begrudging even the movement of my heart beats.

The reptile only hesitated a moment or two, to me it seemed an eternity, and finally slid on into the water which rippled as it passed beneath the surface.

Horrified at how close I had been to death, I stayed awake the remaining part of the early morning until dawn again brought renewed hopes of escape.

Hunger and thirst were now added to my other miseries, and staggering from weakness,

I set the guide post ahead and started out.

Fortunately, the swamp was giving way now and then to a solid spot on which I could make fairly good time as I staggered on across it.

Fever had taken possession of my body on this third day and I could vaguely realize that if I didn't get out pretty soon delirium would likely rob me of my senses.

Having attained my fourth, or was it my fifth, guide point of the day, I again attempted to set the compass course as usual, peering to the fartherest spot I could make out among the trees. I wondered whether or not my sight was dimming or if I was soon to gain my liberty. It seemed that the trees stopped a few thousand feet ahead.

Dragging one foot after the other, and still

holding the aileron which I had carried so long, I reached a dry spot and laid down to rest for a moment or two. The sun was beginning its trip to the western horizon by this time.

Closing my eyes just for a second I dozed.

* * * *

Down the track roared the Dixie Flyer, and with shrieking brakes, it slid to a stop.

The engineer and fireman walked to the front of the locomotive to remove what appeared to be a large plank from across the tracks.

"Why, its part of an airplane," the fireman shouted.

"My God, there's somebody lying in the ditch. Say, I bet that's the aviator we read about at Atlanta. Wonder if he is alive?"

HANDSPRINGS FOR HAMBURGERS

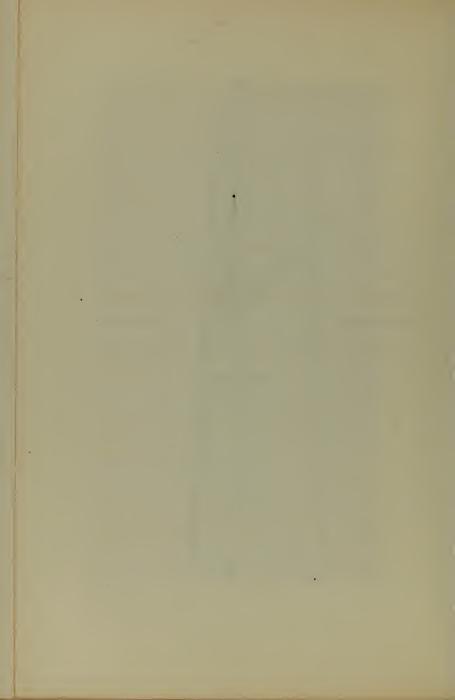
Pulling me up onto the tracks, they determined that I was still alive and rushed my wasted form to the hospital.

No one knows, nor do I, how I found my way finally out of the swamp on that last lap.

A week of delirium followed by two more weeks of convalescense and I left the hospital and headed for Houston, Texas, by train to get another ship.



Curtiss Pusher Type



FOUR

In light of the terrible experiences of some of the early aviators, it is hard for the layman to understand why men would continue on and on during the pioneer days, without thought of giving up.

It was the vision of the future, so deeply imprinted on all true airmen's minds, that kept up their spirits.

Arriving in Houston, I bought a new ship with almost the last penny I could scrape up and started out again.

When writing to my friends I remarked that I was still turning handsprings.

Business wasn't so good, but it was no doubt due to the weather.

I was sure that in another few weeks things were going to be better. My middle name should have been "Optimism."

Sitting around the field one day in Louisiana, I was scratching my head for an idea, anything that would pad the larder.

Something had to be done in order to get off the hamburger diet which was getting mighty irksome.

There was a long, high bridge over the river, which ran through town. I conceived the idea of flying down over the bridge to study out the possibility of flying under it,

with the thought of getting someone interested in the backing the stunt.

After making the trip I came back to the flying field fully convinced that the stunt could be pulled. I hurried to the largest newspaper office.

Getting an interview with the chief was not hard to accomplish, but getting a contract was another thing.

The chief admitted the stunt was good and all that, but it had been pulled before and he doubted if it would draw a crowd or result in much publicity for the paper.

He was not interested and I was desperate.

"Say, if I could pull a stunt that has never been pulled before, would you pay for it?"

The chief glanced in my direction with a "Well, aren't you gone yet" expression, and

said, "Well, spill it," so I unraveled the program.

The proposal was that I would dive from a thousand-foot altitude, pass under the bridge at the end of the dive and complete a loop around the bridge.

The chief said, "Now you are shouting. Can you do it?"

I would have ridden the tail of a comet about then and said, "I can."

Well, the upshot of the deal was that I signed a contract that read:

"Billy McDowell will dive under the bridge every day, starting next Saturday, and the day that he figures everything is just right he will complete the loop."

The contract also stipulated no loop, no money.

In the old days to have even flown under the bridge, let alone loop around it, would have been worth what I was to get for the whole job.

Five hundred dollars was the consideration and that was a lot of money.

The loop king was well advertised and the whole town turned out at noon on the first day of the stunt.

At the last moment when the newspaper saw the stunt was going over big they agreed to give me fifty dollars not to make the loop that day, but to hold off until Sunday so they could draw the crowd for a second day, that is, I was to pretend that I could not make it on the first attempt and only dive and fly under the bridge. That gave them a chance to speil about how near I came to hitting the

water, etc., and how I would try again the following day.

The trip under the bridge was easy and I went back to the flying field that Saturday night congratulating myself on having made fifty dollars extra for so little work.

I went to bed early that night, to get plenty of rest to steady my nerves for the following day's ordeal.

Well, you can readily believe that the whole county was there to see me do my stuff, or smack the water, and when the time came for the dive the old boy wasn't stuck on the job, even though I knew that if I made it I would be sitting pretty for awhile.

But the contract was signed and the crowd was waiting, and as I now had my altitude it

was either back out or start the dive, so I dove.

It was going to take a lot of speed to get the old crate down to the river, under the bridge to the other side and straight up in the zoom to a great enough altitude to go over on my back and come out high enough to miss the bridge at the end of the loop.

Down I went with the throttle wide open all the way, doubt lurking in my mind meanwhile as to whether the wings would stand the terrific speed, and if so, would they stand the strain when I leveled off at the water to go under the bridge.

It was seventy-five feet from the water to the bridge and ninety feet from pillar to pillar.

Just one little slip would mean a crash.

It only took seconds to make the trip to the

water and I swore that if I succeeded it would be the last time I would pull that stunt regardless of future hamburgers.

I made it under the bridge, then straight up, as far as I dare go, now over on my back and holding her upside down I looked to see how far the bridge was below me. This action allowed the motor to foul up and to save it I had to get the nose down and dive for speed and control.

When I had succeeded in starting the dive I was in much better position to gauge my distance than when upside down and I saw I was in excellent position to complete a perfect loop by again passing under the bridge.

This I did, and headed for the flying field to sit down and think of what a fool I had been. Just then I was determined to quit a business which required such violent action in order to gain a livelihood.

Supplanting this thought was the one that aviation surely would be more profitable next season, and after that the hardships of the past would be forgotten.

That night at the hotel I received my check and congratulations from the newspaper.

I could have cut a wide swath through the town, but for the first time in my flying experience I just could not rise to the occasion.

Sometimes even optimists have the blues, and I had them.

No wonder the public was none too strong for airplanes when aviators provided unfavorable publicity for aviation by dashing out their brains in such stunts as I had pulled that day.

HANDSPRINGS FOR HAMBURGERS

The next few days, however, rid me of the blues, and after fixing up my ship a little I sailed on to new conquests and to carry on the cause of aviation.

FIVE

In Oklahoma I fell in with a flying circus and was getting ahead financially when a woman upset the beans.

I do not mean to say that I hate women. If I did I couldn't have been an aviator, but this particular woman was stirring up a lot of animosity between me and another flier, who was plum gone on her and resented anyone even receiving one of her smiles.

She was a wing walker and parachute jumper and also did a stunt on a plane, that is, she would stand on the top wing at the center with two straps fastened to her belt and a strap to hold on to. Then when she was ready the ship would dive and loop with her standing there as if there was nothing to it.

The rub came when she insisted on performing this stunt on my ship instead of her former pilot's.

I was none too anxious for her favor, but I couldn't make my fellow pilot see it in that light, so things went from bad to worse.

After the performance I would beat it to town alone and to the restaurant for grub.

Invariably before I would be seated more than a moment or two, in would come the dizzy aviatrix and sit down at my table, to be followed shortly by her boy friend with murder in his eye.

It wasn't long before I either had to lick

this pilot or leave the circus, and as I did not care for the girl, I made a quiet exit, heading east with no definite plan in mind other than to try a new field.

The spring of '24 found me in St. Louis and headed for Tennessee where passenger business was reputed to be better than usual since fliers generally avoided this country due to the rough terrain.

Business was pretty good for awhile in Tennessee but it was tough flying.

More often than not the only available field was on the top of a hill. This left me with the prospect of having my engine quit and nothing to land on.

This explains the untimely end of many fliers and their obsolete ships which were really not fit to be flown in good open country. However, luck and my motor stuck with me and one foggy morning I was sitting on a stubble field, wondering if the fog would lift so I could go on to Bristol, W. Va., where there was in progress a county fair and the prospect of getting some passengers.

Consulting my maps I figured I could make it by flying under the fog and following the railroad through the passes in the mountains. The fog would only permit an altitude of a few hundred feet, which in the event of motor failure in such bad country offers the flier little opportunity to pick out a suitable spot to land.

Such lack of judgment has furnished much material for headlines in newspapers.

Well, I started out and was getting along pretty well. All I had to do was follow the railroad and I would make Bristol. I depended greatly on my ingenuity to find a place to land when I arrived.

In those days flying fields were few and far between compared with the thousands of wonderful ones that now exist, and, like highways, are shown on maps right where they can be found.

But that was a part of the gypsy flier's life. He made his way as he went along.

I followed the railroad in and out of the hills, wishing that I had waited for the weather to clear up, but too stubborn to turn back.

At times the right-of-way ran around a hill where the wind was blowing down the side and carrying the fog almost to the track. At these points I had to get down till there was little space between my plane's wheels and the ground, and I would cuss my bullheadedness for having started out in such weather.

There was still hope of getting through, however, and then, the darn railroad ran into a hole in the mountain. As I could not get through, there was nothing to do but turn, and turning was a stunt not to be forgotten in a moment. Where the tracks ran into the tunnel the valley narrowed into a canyon which ran up the mountain, and into the fog I dared not penetrate. I made a sharp, steep turn and held my breath as the wheels brushed the foliage on the hillside.

After making the turn my problems were still many and varied as I could not remember having seen any place for the past hour where I could land, and my gas gauge showed less than an hour's supply. The back trip caused me more anxiety than ever and when the fuel ran dry forty-five minutes later there was nothing to do in the absence of a landing spot but to crack up gracefully on the railroad track.

When it was all over one lower wing as well as the propeller was gone, and I was minus some hide on my shins. I wasn't bad off, however, and mighty glad to feel the ground under my feet once more.

That afternoon a section gang happened along and helped me pile the wreckage on their work car.

The trip ended at the first town where there was an open spot and there I waited for repair parts.

After the ship was fixed I headed for Chicago and a new motor, which took all my

remaining cash, and again reduced me to a hamburger diet.

About that time there was a big flying meet over in Ohio, and as I had always picked up some of the prize money at previous meets, I took a chance on being lucky at Dayton.

I hopped a few passengers on the way over and entered all the contests my ship was eligible for.

The same luck that had pulled me through the past years was still on the job and I left Dayton a thousand to the good.

They say it takes money to make money and it must be true, because the old boy made a steady gain from then on.

Nothing exciting happened the balance of that year and the spring of '25 found me with the first new modern airplane I had ever owned and ready to conquer the world.

I wrote volumes back home about how much better I felt when I expounded the merits of this airplane to prospective passengers.

I knew that I was not lying about it as in former days when all I had was an old pre-war heap of junk tied together here and there with bailing wire and big squares of last night's bed sheets covering the holes punched into my wings by unsympathetic cows during the night.

I was proud of that first modern job.

The round the world flight by this time had aroused public interest and some good publicity. Although passenger rates were very low, there were more passengers available and I was eating regularly and was extremely well

HANDSPRINGS FOR HAMBURGERS

pleased with the state of affairs concerning aviation.

Surely that pot of gold at the rainbow's end couldn't be far off now.

Rain or shine whenever I could get the ear of a passenger prospect I, Billy McDowell, was on the job.

SIX

That winter I went on the sales staff of a new airplane company, and having sold my own ship, I started out to persuade fliers throughout the state to take on the sale of my factory's planes just as they would contract to sell automobiles.

This work meant that thousands of miles were to be flown in response to requests to see the new ship.

Much bad country had to be traversed and bad weather conquered, but the ship was a dandy, and fast, and my faith in it was unlimited.

One night I received a wire advising me of a red hot prospect in Memphis, Tenn., and directing that I go there immediately. Of course, back at the factory, basking in the sunlight as he was, it was easy for the sales manager to issue this order, and yet at St. Louis where I was, and on down the Mississippi River, it had been raining for over six weeks and the river had been rising all the time and overflowing its banks.

On top of it all was the dreaded fog that lay almost to the ground.

I would rather have waited until the weather cleared up as I knew of no fields on the route where I might set down if the weather got too bad, but the prospects of clos-

ing a deal at Memphis could not be resisted, so on the following morning against the advice of other pilots I took to the air.

This was in the late fall of '26.

I had five hours' gas supply and settled down to what would ordinarily be a three hours' flight as the crow flies.

The fog was only a short ways off the ground and naturally it was necessary to fly very low to keep the ground in sight, as well as the river which was on the course and a good trail to follow.

A half hour out it started to rain, but this caused little concern, inasmuch as the motor was well cowled in and supposed to be water-proof.

Flying conditions were poor at best and I would be glad when Memphis hove into view,

but it was not to be the easy trip I had anticipated.

Less than an hour after the start the fog ahead closed in clear to the tree tops, and knowing well what that meant, it appeared better judgment to turn back, which I started to do, only to find that the fog had closed in behind me.

Only the small area immediately surrounding was now open.

The logical outlet was to open the trottle, climb up through the fog and follow a compass course towards my destination, taking a chance on the sky being clear enough there to enable me to see the city when I arrived.

Here was a predicament.

My factory had not seen the necessity of equipping my ship with blind flying instruments, which would enable me to keep the ship level under fog conditions, yet I was faced with the absolute necessity of going through thousands of feet of fog with the ever present danger of getting the ship so badly out of level that any minute it might fall into a spin and crash to earth before I could get it straightened out.

There was one possibility—that was my compass.

The card or round dial in the compass floats in liquid and when the ship is on an even keel, the card and liquid remain level in the bowl.

So up through the fog I climbed, keeping the correct compass course, and meanwhile leveling the ship by watching the card and liquid. Three, four thousand, five thousand and on up to the limit the ship would climb and still fog everywhere. It is mighty lonesome away up there with neither sun or land in sight and the fog so thick that the wing tips can hardly be seen.

By this time I had been out two hours with three hours' gas supply left in the tank, and as the old boy said, "Things were getting complicated," especially if the motor stopped moting, making necessary a forced landing, with no idea of just where I was or whether I would get down through the fog soon enough to miss being kissed into Kingdom Come against old Terra Firma.

The least of all evils appeared to be to get down in sight of the ground while the motor was still purring and then try to pick up the river again for a guide, hoping against hope as I lost altitude that the fog would be just a little ways off the tree-tops so that I would have a fighting chance.

Down and on down I went, to a thousand feet and still nothing in sight. From then on down as slowly as possible to two hundred feet above zero on the altimeter. I could only guess as to how much lower the ground level would be than it was at St. Louis, however, I knew it would be quite a little, as the level lowers along the Mississippi bottoms as it goes South. Disregarding this fact it was most uncomfortable for me to see the altimeter register zero, the same position it had held on the take-off at the start of the trip, and yet nothing in sight.

Thoughts of the past years flashed through my mind.

Was this to be the last flight?

Were all the years of sacrifice for naught? It looked pretty tough just then.

Mist seemed to be invading my goggles, or was it tears?

"Enough of this," I said, "I will not give up," and I took a new grip on myself.

Holding back on the throttle, I allowed the ship to settle slowly until the meter read two hundred, and finally three hundred feet under zero.

Were you ever out on a big lake in a punk motor boat and a long ways to shore and the darn motor quit and it got pitch dark and started to storm and the water got rough and you had the whole lake to yourself? Well, that's about the time you would sell out at a bargain. Now just double this situation by being with me, with my altimeter showing three hundred feet under zero and no ground in sight yet, then you would give your interest in the whole shebang for nothing.

Easing on down from there I could only hope that whatever I hit I wouldn't hit it too hard.

Finally, out of the corner of my eye I could dimly see something pass me.

Startled, I glanced anxiously down and there just a few feet below me were great tall skinny trees, and at their roots water as far in every direction as I could see.

Now things were tough!

The big problem was to find the main channel of the river, and as I said, "that was one of those eenie, meenie, minie, moe propositions," so I flew due east twenty minutes and back west thirty minutes before picking up the river.

Time and again while doing so the fog would close in clear to the tree tops, at which times it was just a gamble when I plunged through these low hanging strips of fog as to whether or not I would come out on the other side of them and still keep out of the trees.

Meanwhile I was busy crooning a lot of sweet promises to my motor if it just wouldn't get temperamental, at least until I was out of that mess. At the edge of the main channel where the fog was again closing into the trees I barely made it over their tops and down to the water before my vision was again cut off.

The direction of the prevailing wind was

such that it seemed to bring the fog down over the trees at the channel's edge and dump it almost to the river's surface.

If I were ever to reach Memphis it would be by keeping the river always in sight and to do so it was necessary to follow every twist and turn of the channel just as a boat would.

There was the fog ceiling that I was just barely able to keep under, and boxed in on each side by the tree line as I was, I simply went wherever the river did.

Now and then I would get on the wrong track and follow up a bayou to a blind end. That is, the back water would appear to be the main channel and lead me on and on back into the trees. Then as a spider that sits in its web, before I knew it the bayou would end, with here and there a gaunt tree

sticking up out of the water to catch a wing. It was at times like this that my resources would be almost drained. In between trees, now banking up between others that were too close together to pass through on an even keel, and back to the main channel again.

The river was simply everywhere.

Up to this time I had been on my way four hours and it is always best to figure on landing with some gas in the tank. Of course, this was impossible as there was nothing but trees and water.

Along with the fog it had been drizzling and I had sighted land in the middle of the river, which undoubtedly was Island 35.

I knew I was just thirty five miles from Memphis, and at the same time dead ahead and on both sides of the island were those black streaks extending from the fog down to the water, and through which I could not see.

That could be nothing else but heavy rain.

Indeed things were now complicated. This kind of weather is bad enough at high altitudes, but when you are flying right on the surface of a river as I was, it is hard to describe.

However, as I said, "Where you came from wasn't any paradise, and where you are is just as bad, then where you are going can't be much worse."

Pulling my head in, back of the windshield I pushed on into the downpour, which grew worse as I progressed.

Keeping close to the shore I did the impossible by watching for an open spot on the island, or the mainland, at the same time wip-

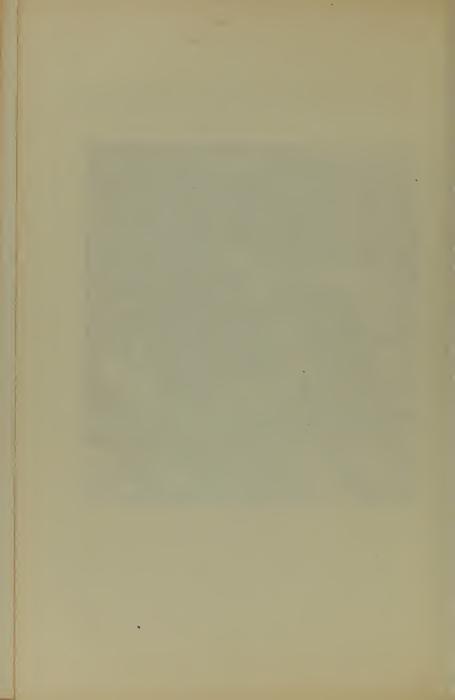
ing my goggles free from water and keeping my wheels out of the river.

If that had kept up much longer I would have been made permanently cross-eyed.

Well, the good Lord watches over aviators and when my motor elected to take on water by way of the magneto, a two-by-four opening on the island showed up, but it was too short for any airplane to get into by coming over the high trees, and besides there was the fog to contend with just even with the tree tops. I turned away, praying that the few cylinders remaining would last just a moment or two more.



Glen Martin



SEVEN

I had noticed that the only place on the clearing that was not full of stumps and drift wood was a narrow strip about four hundred feet from the shore line and close to the trees. The clearing in its entirety was only six hundred feet lengthwise with the river, and it looked impossible to land an airplane that far back and not crash into the trees before the ship stopped rolling.

Resorting to an old trick learned years before in stunt flying, I flew with a dying motor, in a wide turn over the surface of the water and finally headed down wind, straight at the far inside corner of the clearing.

As the trees loomed up dead ahead I continued straight at them, and at the last second shot the nose of the ship up into the fog, up until it was very near a stall, then kicked the rudder to the left. This manœuvre brings the tail up and the nose down very sharply.

At higher altitudes it would have been called a wing over. In this manner I hoped to be able to use the last gasp of the motor to pull up the nose just before striking the ground and head into the wind facing the longest way of the field.

Thus I would have the advantage of not having to clear the trees at the end of the field on which the manœuver had been executed. It was only one chance in a million, but life was sweet and even a drowning man will grasp at a straw.

Meanwhile, the terrific downpour was blinding me so that I could only see a short way ahead. As the ground came up I waited the split second necessary to gain speed and control, then I pulled back on the stick and waited either for response or the inevitable crash.

On the ground!

I could hardly believe my eyes. There I was rolling along a few feet to a dead stop and with no damage. You couldn't beat that kind of luck with a horse and buggy. I crawled out and stamped my feet for joy. I wasn't a religious man, but I found words of thanks to my Maker for the new lease on life that had been extended me.

It wasn't long until I had company in the way of five darkies, who comprised the populalation of Island 35, and heard the sad news that the water was too swift to cross in a boat to the mainland and the nearest town.

The poor negroes were just waiting for the Mississippi to come up the shores and get them, unless some of the white folks remembered they were there and came after them in the mail steamer.

Well, I felt just like kissing the lot of them for joy at even being there with them as bad as it was.

They lived back in the trees in a little threeroom log cabin, but it looked as good to me as the Waldorf. Ham and eggs were soon before me and that night I had no compunction in accepting their hospitality and what they called their guest chamber.

It was a small room with wall paper tacked to the rafters, I could hear the scampering feet of mice, and as the lamp was lit I could see the undulations of the wall paper as they raced back and forth between the rafters.

I could not help but compare the quarters of these poor souls with the comforts of many homes in the cities.

Placing the smoky lamp on the rickety dresser, the old darky mother of the family left me with a "Good night, boss," as she closed the door.

Undressing I mentally figured out the way I would attempt the take-off on the narrow field in the morning . Turning back the covers

of the deep feathered bed, I blew out the lamp and shiveringly jumped in.

It only took half as long to get back out again as it was just like lying down in a bed of cold fish.

Lighting the lamp I examined the bed.

The prospects of a beautiful night's rest were blasted.

The bed was soaking wet from a leak in the roof.

I was pretty miserable.

There was nothing left to do but to dress fully, even to my rubber flying suit, pick out the dryest spot on the bed and make a night of it.

Morning was welcome when I could leave the clammy room and huddle by the log fire until breakfast was ready. While waiting for a washboiler of water to heat for my motor I entertained an attentive audience with accounts of my experiences of the day before, meanwhile, getting a big kick out of watching the dexterity of the old negro mammy occasionally taking careful aim, spitting snuff clear across the fireplace and hitting the same spot in the same corner each time.

Eventually the water was ready and put into the radiator of the ship, then the motor was started and warmed up.

Measuring the gas in the tank, I determined that I had enough to finish the trip to Memphis unless bad luck overtook me. There was little wind, and although drizzling a little, the clouds were high enough for fair visibility.

The main problem was whether or not the

ship would leave the ground in a short enough run to enable me to either climb over the trees or make a climbing turn out over the river.

The only hard ground was two narrow wagon tracks which ran the length of the takeoff strip, and now and then at the side of the tracks there would rise out of the tall grass a menacing tree stump that meant disaster if the wheels should leave the tracks before taking to the air.

Pulling the ship back to the tree line to the last inch possible I handed a bill to the darky at my side and repeated my thanks for their hospitality.

Climbing into the cockpit and with a promise to send back help from Memphis to them, I opened the throttle.

HANDSPRINGS FOR HAMBURGERS

Down the tracks I rolled with the ship's tail high so I could see as much of the tracks as possible over the nose.

I dared not leave them.

I knew that to clear I had to leave the ground the first three hundred feet, or pile up in the trees or among the stumps.

It was a chance that had to be taken or stay with the darkies.

Two hundred feet and still my speed was maddeningly slow.

Would I ever gain flying speed?

Now I was almost to the three hundredfoot mark and I could hardly breathe as I waited for the time to come back on the controls.

Would the ship respond?

For a second it seemed to remain fast to the

ground and then there came a change in the engine's exhaust note, which to aviators means the earth is being left behind.

Fearing to continue the climb because of the insufficient speed of the plane to sustain it in the air, I leveled off and skimmed the ground.

The towering trees rushed on at me like a tidal wave.

Everything now depended on speed.

Straight as an arrow I held my course into the wind and when but a few feet still remained before a crash I staked all in a steep turn, climbing just as little as would permit the clearing of the stumps with my wing.

Below me flashed the stumps and driftwood and the ship was settling.

Now the water's edge, and as the trees had

been cleared, I leveled the ship out and it was a race to gain flying speed again before the wheels touched the turbulent bosom of the river.

When it seemed that only inches remained the air speed indicator climbed to the required speed and with joy in my heart and the prospects of a warm bath and clean bed in Memphis, I sailed away on my course.

It seemed but moments till the smoke arising from the city of Memphis appeared on the horizon.

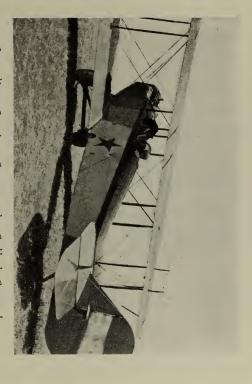
The airport lay to the east of the main populated part of town and as I flew over the house tops the uneasy thought that my starving gas tank might give out before I reached the field worried me, but for that particular trip my troubles were over.

Circling the field, and judging the best landing spot, I squared away, headed into the wind and set her down.

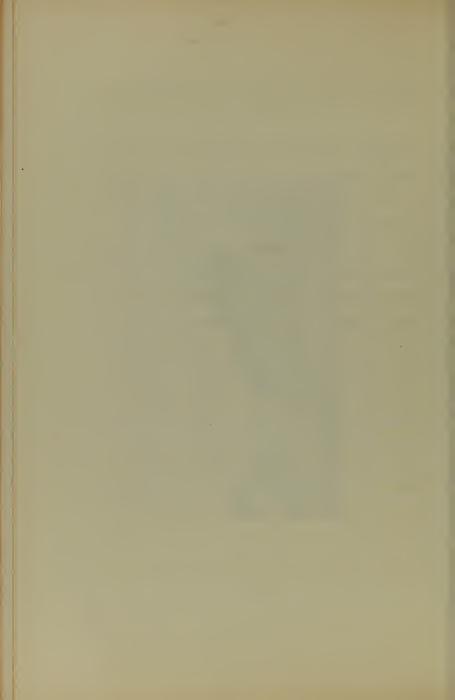
The ship rolled hardly fifty feet when it stopped amidst a shower of mud.

That was to be the resting place of the plane until the flying field attendants with the aid of a darky and two mules pulled the ship back up to the hangars.

To this day I doubt whether or not the veracity of my story told the Memphis boys had been accredited by them. They simply would not believe that any human being could have made that trip in the weather afforded along the route.



Canadian Curtiss, Commonly Called Canuck



EIGHT

I was compensated for my trying trip in the closing of a nice contract at Memphis.

Next orders were to Florida and after several days' rest I was on my way, via Atlanta and Macon, Georgia, and from there on to Jacksonville, Florida.

As I passed around the great Okefinokee Swamp my memories drifted back to the three days passed in its inhospitable confines.

Arriving at the Jacksonville port I was greeted by my old friends of past years and

entertained way on into the night, as is the custom of aviators.

Next morning I made ready for the take-off to Daytona Beach, and as I had picked up one of my company's officials who was to accompany me on down to Palm Beach, I had to unload the passenger cockpit and leave behind a lot of gas cans, etc., to make room for him.

The trip down the beach over ancient St. Augustine on the way to Daytona was simply a matter of steady flying, as I kept the smooth, hard sand underneath me in the event of an emergency landing.

Here and there below, the land showed the signs of havoc brought on by the great Florida hurricane just a few weeks before this trip.

Landing on the smooth sands of Daytona Beach I was greeted by other aviators, some of whom remembered me from past visits, and when they learned that I was now a fullfledged traveling airplane salesman I received their congratulations.

Aviators as a rule are the most skeptical humans living and all the salesmanship that I could muster would not convince them that my ship was the best on the market and just the thing for them to fly.

One hard-boiled flier who had heard some of the many stories that are always circulated about a new plane alleged that he was going to take the agency for some factory's ships, but he would not consider buying the Rocket which I sold, remarking that he was not going to trust his tender neck to such a contraption.

This got under my collar. If I had not all the

confidence in the world in my machine I would hardly have offered it to my fellow pilots.

With a muttered "Watch my smoke," I started up the motor of my ship, roared down the beach and as the wheels left the ground made a beautiful turn out over the breakers.

Disregarding the direction of the wind, I continued on in a turn down wind and still climbing at a sharp angle, passed over the heads of my skeptic friends.

I knew very well that if I were to remove their antagonism towards my ship it would be by flying the plane into their hearts.

On up into the cloudless sky I rose until five thousand feet was registered on the altimeter. Then the pilots on the ground saw the ship rise until it appeared to be motionless in the air and as I had stopped the motor dead

HANDSPRINGS FOR HAMBURGERS

the wind no longer carried the sound of its exhaust.

Knowing well of my intentions the watching aviators looked forward to an exhibition they knew would be out of the ordinary.

As the motor's sound was no longer heard the scream of the wires took its place.

Could it be true that I was going to attempt something with a dead motor?

Yet on and on I came with the propellor standing still.

"God Almighty, look at him dive."

"He must be mad."

"No ship's wings will stand that strain."

Hundreds of feet straight down plunged the ship.

Now I was straightening out.

HANDSPRINGS FOR HAMBURGERS

"Say, watch him, he is going to try to loop."

"That ship must be built like a pursuit plane to stand that strain."

On, up, up in a zoom, over on my back and now straightening out from a perfect loop with a dead motor, then plunging on down again ever closer to the sea into another loop.

"Say, that guy has lots of confidence in that crate to pull that stuff, hasn't he?"

"For God's sake, he isn't done yet."

"He's going to try to roll it."

"Did you ever see anything like it?"

"A perfect roll without the motor, and another roll!"

"Boy, that is some job."

"Gee! I hate to watch him any longer."

"Say, Scotty, you must have got under his

hide when you gave the Rocket the raspberry."

"What do you think of that job now?"

Scotty smiled and said, "Boy, I want to fly that ship myself. I'm just waiting for him to spin it now and if it don't spin bad, I'm going to know somebody lied like the devil to me when they knocked that ship."

"There goes the spin, watch it."

"For crying out loud, what is he going to do next?"

Coming out of the last spin I swooped to the water's level with screaming wires from the terrific speed.

Making a steep turn I leveled off, headed into the wind down the beach and rolled to a stop in front of the boys who were no longer skeptical. Climbing out of the ship and walking over to my old friend, Scotty, I said with a chuckle:

"Well, you hard-boiled egg, what else do you want to know about the Rocket?"

Scotty stuck out his hand and said----

"Boy, I want to shake hands with you. You did pretty nearly every stunt with a dead motor that I have ever seen done with full power. I don't blame you for believing that's the best job made. All I want is to fly it."

"There she is, go to it!"

When Scotty's trial trip was over, I signed him for a good order and the agency for one of the southern states where Scotty made his headquarters during the summer months.

My plans were to go on to Palm Beach that afternoon and the company official who was

riding with me promised faithfully to be on the beach ready for the take-off not later than two o'clock, an early start was imperative for Palm Beach must be reached before dark as it had only one landing spot and that was a fairway on one of the golf links.

At one-forty-five with the engine running and all ready to go I was impatiently waiting for my passenger.

Five minutes to two and still no passenger.

Then ten minutes after and I cut the switch, determined not to take a chance on such a late start.

At two-fifteen down the beach raced a big touring car and in the front seat sat my passenger with two blondes.

This chap knew very little of airplanes, nor the meaning of starting the trip with such a late start, and upon learning that I did not mean to leave that day he immediately began to rave, saying that he absolutely had to be in Palm Beach by night, and in the presence of his blonde friends insinuated that I was yellow.

My temper rising to the surface, I replied that my thoughts were only for the safety of my ship and passenger, but if he wanted to take a chance of a crackup in the darkness to climb in.

This took the passenger back a little, and to save his face before his fair blonde friends, he climbed in.

Down the beach and away on the take-off we went. I knew that if we were to complete the trip by sundown and in time to make a safe landing the flight would have to be made at full throttle.

As we hummed along mile after mile the tide came further and further up the beach, each moment shortening the possibilities of landing if necessary.

Seventy miles out of Palm Beach and just an hour before sundown, we ran into a stiff head-wind, which reduced our speed to almost a crawl.

It was going to be a close race with the dying sun and with the odds against us.

The solid white beach that had predominated along the water's edge from St. Augustine clear to Coco Beach, miles below Daytona, no longer existed, and taking its place were the rocky cliffs and soft sand on which it was considered impossible to land.

Twenty minutes from our destination the last dying rays of the sun had disappeared. As though I had not already had enough trying experiences, here was another momentous problem troubling me. Would there be any lights on or near the golf links by which I could identify the landing when I arrived, and would I be fortunate enough to find the fairway even if I did find the links?

I passed over the city and to the southeast outskirts where the golf links should have been and trying my best to pierce the darkness, I circled round and round.

Still no landing spot could be seen.

In desperation I again returned over the city to the beach, trying to figure out if it would be possible to make a landing in the soft sand without accident or injury. In addition to this there was the dumb passenger who knew so little of airplanes that I doubted if he realized the seriousness of the predicament we were in due to his procrastination at the start of the trip.

Arriving over the water's edge I peered for a level spot on the beach.

My plan as to how I was going to attempt the landing had been completed and the problem now was to find a level part of the beach where the sand was not raised up in dunes.

Climbing to a high enough altitude so that I could shut off the motor and talk to my passenger, I warned him of the possibility of a crash and instructed him to cross his arms and brace his elbows against the front padding of the cockpit, and to lay his head in his arms until we were on the ground.

Going down and just barely skimming the water I looked over what appeared to be a hopeless task.

Inky darkness prevailed on the beach, but just then my guardian angel came to my assistance, by lighting the street lamps on Oceanview Drive, which ran at the very edge of the beach for miles.

If I had known who turned that switch I would have certainly extended him my fondest thanks.

Back and forth we cruised.

Now I could see a strip I believed I could get down on without running into the steel fence-posts that had been set out into the beach and water, as is the custom of property owners living immediately back of that strip. I afterwards learned that they even claimed

the beach and ocean. With the possibility of getting down in some manner or other solved, I could not forget that even if I did succeed in landing and staying right side up in the soft sands, there would be the problem of building some kind of a run-way to take off of on the morrow. This was a problem and as I cruised on down the beach just over the breakers I kept a sharp lookout for wreckage or anything that could be used for this purpose.

While the search was in progress I brought into sight a long and apparently level strip of beach, immediately in back of which was an enormous mansion. Light blazed from nearly every window, and laying along side of the beach was a large pile of lumber.

That was a chance of a life time, and there I decided to stake all.

Flying along examining every inch that I could by the lamp lights, I finally swung out over the sea in a wide turn close to the waves, and when headed at the near end of the beach came in towards the sands ever slower, trying to gauge the speed of the ship so that it would settle in at the slowest possible momentum.

Closer and closer I drew to the goal, and at the first touch of the loose sands to the wheels, pulled sharply back on the control to dig the tail skid into the sand, meanwhile, shoving open the throttle to provide a terrific blast of air from the propeller on to the top of the tail surfaces, thereby, preventing a nose-over.

Everything clicked off like clock-work and in just a few feet the faithful ship had lurched to a stop with the wheels buried deep in the sand.

Not a word was spoken between passenger and pilot as we climbed out of the cockpits, but the passenger on reaching the ground fervently shook my hand while he murmured something about wonderful work and apologized for his remarks back at Daytona.

Glad as I was to be on the ground again safe and sound, my heart was too full to provide room for resentment.

Soon we were surrounded by excited motorists who had observed our attempts to make a landing, and many willing hands were lent to the task of dragging the ship off the beach out of reach of the tide.

Next morning bright and early I was out on

the sand to study the possibilities of a take-off to Miami.

Accompanying me was my passenger of the night before who insisted on doing whatever he could to assist in the preparation, although he did not intend to continue by plane.

On the beach we were studying over every angle and wondering how we were to build a plank run-way on the soft sands. This presented a problem for just the two of us, and besides we had not secured permission to use the material from the nearby pile of lumber.

The sun was getting in full swing as I was about to start back to the mansion in search of help when I was nudged by my companion.

"Pipe the swell dame coming," and turning I glanced towards the big mansion, and there sailing majestically down the sidewalk was probably the most beautiful woman I had ever seen. I could not help but make the remark that she was such.

On she came and as she drew closer to us we could see an expression of wrath clouding her features that was entirely out of place on such a face.

Introductions were not necessary as the beautiful damsel opened the conversation by asking me----

What in the hell was I doing on her beach with that pile of junk?

Bewildered, I turned to my companion and back to the lady with the remark, "Pardon me."

I could hardly believe my ears.

Fired as she was with anger, she gave me no time for further retort and continued to advise me in no uncertain manner, and with language that would be an education to any hard-boiled aviator, that this was her beach and if I didn't get my "pile of junk," as she called it, out of there in something less than no time she would have it hauled away by the junk man.

This was a new experience for me and I mutely stood wondering whether my mind had left me.

Soon I realized that this woman was really in earnest.

Up to that day I had never cussed anyone like I had just been cussed, and as the red crawled up my neck and around my ears. Had she known me better she would have realized what was coming.

Believing that language such as she had

used was the only language she would understand, I finally unwound by telling her of the predicament I had found myself in the night before.

I assured her that were I to find myself in a similar predicament in that same vicinity she would have ample opportunity to again exercise her vocabulary.

When I was through there was silence for a few seconds and as my anger subsided I could have kicked myself for losing my temper.

As my back was now turned to the angered woman I could not see the shadow of a smile that was beginning to creep over her face and when she threw back her lovely head and let out peel after peel of uncontrolled laughter, I was startled and turned to see what it was all about.

To my surprise she extended her hand to me with the words, "I'm sorry. Won't you please forgive the terrible things I said to you."

Unexpected as this turn in her attitude was it left me completely flabbergasted and at a loss for words. I would much rather have had her remain in her angered mood after what I had said and I was entirely disarmed.

Indeed here was a puzzling woman.

Further demonstrating her sportsmanship she gave orders for every man on the estate to lend a hand in building the necessary run-way for my take-off. Soon this job was completed and placing the ship on the run-way which ran diagonally down towards the breakers, I again staked all, as I had done many times in the past, and roared down towards the sea on the planks.

Nearer and nearer I drew to the breakers and when it was either hit them or take to the air I came back on the control. Beautifully the ship rose and I was again on my way to the next stop.

Arriving at Miami I figured my frazzled nerves were due for a rest, and after selling my ship to a new dealer I decided to return home for Christmas and then back to the factory for a new demonstrator.

Catching the Dixie Flyer I settled back comfortably in a Pullman in anticipation of a nice long rest and to let the engineer do the worrying on the way home.

The second day of the trip my train was

standing on a siding up in Georgia waiting for the south-bound train to pass.

It was about six-thirty in the evening and I had just left the dining car, having finished my meal. I would have stayed a while to chat with the congenial chaps at my table, but as there were many waiting to be served, I left at once and walked forward to find a news butcher. I had gone through five or six coaches when there came the roar of an approaching train. Whish! as it passed my car and then crash.

I made the length of the car on the back of my neck, ending up against the end of the coach, ruffled a little, but unhurt.

Pandemonium reigned as the uninjured rushed to the rear of the train, to view the ter-

rible disaster that was heralded to the world that night.

The dining car had not been pulled clear of the on-rushing train's path and the congenial friends I had chatted with but a moment before lay lifeless in the wreckage. I shivered as I helped in the rescue work, wondering how America could be airplane shy when such things as this great catastrophe were happening every day in other modes of transportation.

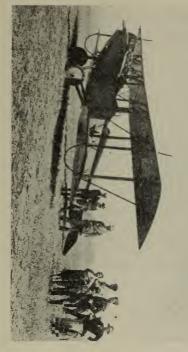
My mother wondered at my sober attentiveness over the holidays, but I kept my secrets.

When my visit was over I boarded the train for the trip to the factory with misgivings. I could not forget the occurence in Georgia.

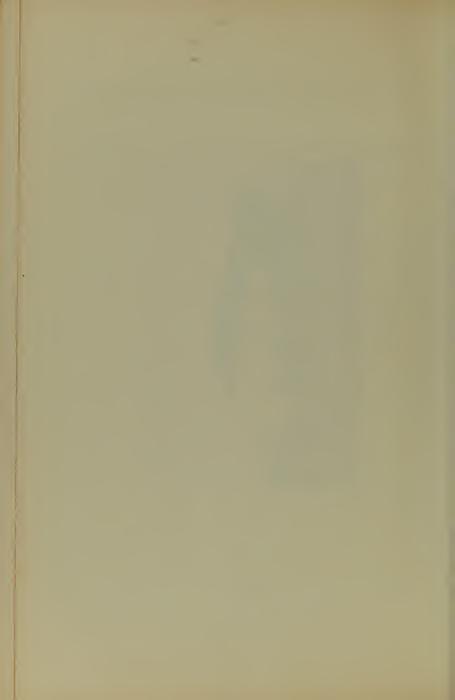
Along in March I decided to go back on my own hook, and purchasing a new ship I left

HANDSPRINGS FOR HAMBURGERS

the employ of my factory and started off again to reap the harvest of the increasing popularity of the airplane.



Canuck



NINE

Then Lindberg made his glorious flight. That inspired millions of citizens and overnight they became interested in aviation. Thousands of cities began to establish the flying fields that were as necessary to the safety of flying as roads were to the motor car. Almost instantly governmental aid was furnished throughout the states in making available weather reports to the aviators. These covered conditions on any trip they might undertake and helped them to avoid the possibility of starting off on trips where the weather

odds were dangerously against them as they were on my trip to Memphis, for instance.

After the impetous given flying by Slim's trip I just couldn't help but prosper.

Then came the big transcontinental race with enormous prizes hung up for the lucky boy who won.

The old racing fever came back with a rush and when the first starting flag was dropped I was on the line.

It was early in the morning, raining, and the fog hung low.

The course lay over the Statue of Liberty on the way out of Long Island, New York, and one at a time as the starting flag dropped for each contestant, throttles were opened and they roared away into the mist on this great adventure. Finally, my turn came and I also disappeared into the fog.

Throttle wide open and eyes glued to the compass, I passed a shadowy specter which meant the gaining of the lead over one of my opponents in the race.

The first hour out was a matter of flying just over the house-tops in order to keep away from the aviators' worst enemy----fog.

The motor was tuned to the highest pitch and sang on steadily mile after mile.

Speed and a straight course to the first stop were the prime factors, and with that pot of gold at the rainbow's end on the Pacific Coast awaiting me, what mattered the elements?

Arriving at the foothills of the Alleghanies where the ground rose up into the fog, the first problem presented itself.

Here was where I had to guess right. No passes were shown on my airway maps at this point and the obstruction was indicated as being a long mountain ridge extending many miles crossways of the course with a wide valley on the opposite side.

Taking into account the highest elevation indicated on the map for that vicinity, my next move was to circle around, meanwhile, climbing up into the fog until my altimeter indicated a greater height than that of the ridge.

Having attained this altitude, I again flew the compass course towards my goal through the blinding fog.

This time I had fog flying instruments.

Counting the minutes and gauging my distance traveled till I was sure that the ridge had passed beneath me, I flew back down

through the fog, feeling for sight of the ground in order that I might not pass over Belfont, the first stop, while flying blind.

Over the valley roared the ship.

Passing around small hills and skimming the ground I ate up the miles to the next ridge. Just a little to the left of the course I knew I would find a pass (through this ridge) through which it would be possible to squeeze, and by flying close to the surface of the river I could keep under the fog.

Having passed on through, I was again in a valley and now the high ridges were laying nearly parallel with the course, and it was necessary to fly up the narrow valleys between them and still close to the tree tops.

Here the possibility of landing was absolutely out of the question and this sort of fly-

ing so far had amounted to the betting of my neck against the continuing of the motor to keep on singing its song of defiance to the elements.

The valley was narrowing considerably and those black streaks that reached from the fog down to the tree tops once more were dead ahead.

This was the point where it was either turn back and quit or bet all on getting through. It was a tense moment and the temptation to turn back was strong.

Then the years of struggle and disappointments passed in review before my mind. Winning this one more battle would possibly mean the final achievement of the long sought stake that meant the fulfillment of my plans.

Would the downpour be great enough to

force the ship to the trees or would the magneto be drowned out?

Either event spelled the end of the race, to say nothing of probably closing the book in the first part of the last chapter for me.

I could climb on up over the fog, but then there was the danger of passing over Belfont and never seeing it.

Not one minute could be spared looking for the stop, so I did as any other kindred spirit would have,----broke into the downpour. The steel propellor rang as it tore into the rain and sheets of water trailed off the wings.

Shuttering like a frightened creature the ship plowed on into the midst of the night-mare.

Frantically I wiped my goggles free of the blinding water with one hand while with the

other I held the ship off the tree tops by the control.

Still the motor sang on.

Then what had been rain turned into hail that brought blood to the surface when it found its mark on my cheeks.

It was indeed weather that no human should have been out in.

Inconceivable as it might seem for conditions to get worse, it was my misfortune to fly on through the hail, only to again plunge into an even greater flood of water than before.

God alone could continue the flight now as the water had finally reached the magneto.

One at a time the cylinders began to miss in the engine.

Now just one, then more, until the landing

wheels seemed to brush the trees as the ship lost speed.

Then when my hopes were gone, my guardian angel came to my rescue and brought back a cylinder or two and the power to again lift from the menacing branches.

Having pulled the radiator shutters to heat the engine and dry out the magneto, there was nothing to do but trust to luck and my Maker.

Once more as I sputtered along I could see more clearly ahead where only a few hundred yards away the ground level rose.

Only a few feet, but little as the rise was, I knew I could not make it with the crippled motor.

Turning was impossible, as the mountainsides, tree-clad as they were, were at my wing tips. Slowly the dial on the dash showed the engine's increasing heat and on rushed the elevation that spelled doom.

All I could do was wait, even as the condemned wait for the closing of the switch that means oblivion.

Then it was a matter of seconds.

Either more power or a crash!

"God help me," I muttered.

Pop, pop, bang! and my tackometer showed more motor speed and in the split second left I came back on the controls, up with the ship's nose, and thanked God for sending back two more cylinders that meant a fighting chance over the rise.

It was cold that morning, but I felt suffocated. Below lay a valley and in the distance Belfont and a five-minute rest.

HANDSPRINGS FOR HAMBURGERS

I roared into a landing with still one cylinder out.

Mechanics filled the gas tank while I inspected the motor and wiped the remaining water from the magneto.

"One minute left," shouted the official starter, and taxing to the line I made ready for the next dash to Cleveland.

On the dropping of the flag my ship bounded down the run-way and into the air.

The sun was stealing through the clouds, and there was a promise of fine sailing from there on. My elapsed time on the first lap was shortest of them all and my only thought was to continue to increase my lead by every possible moment.

There was a stiff head wind blowing now, which lessened closer to the ground, so my

best bet was to hedge hop, or in other words, fly as low as possible to make more speed.

One more of the early starters passed to my wake. Engrossed as I was in navigating a true course, the hours rolled by as minutes and I flashed to the run-way at Cleveland still in the lead.

Then Bryan and on towards Chicago and victory for that day's part of the race. As there were eight ships started, one minute apart, ahead of me, at New York, I could not know whether any of them were still ahead.

There had only been time at the stops to learn that I was in the lead. A tiny speck now drew my attention.

Was that a ship?

Slowly it grew larger as the superior speed of my plane shortened the distance between us, and now I could see it was number two contestant. Using every trick in the bag to get just a little more speed I gained what seemed to be only inches, to come abreast of him. Mile after mile we battled for the lead.

Finally drawing ahead I lay down even closer to the ground in the hopes of taking advantage of heavier air that meant more purchase to the flashing propeller. (He was getting smaller and smaller as I increased the distance between us.)

Ahead lay Lake Michigan and the direct course to the Chicago Field lay out over the water, but aviators usually prefer following the shore line when flying a land plane.

Should I fly the true course or play safe with the shore under me?

What would the other fellow do?

HANDSPRINGS FOR HAMBURGERS

Anyway, it couldn't be any worse than it was back in the mountains.

The temptation to gain a few miles out over the water was irresistible, so true course it had to be.

The sky was clear as a bell now and the slanting beams of the dying sun gave the quiet waters an appearance of glass. The air was smooth as velvet, and worn by the day's trials as I was, the trip across the lake was a welcome rest.

In back of me trailed number two and its pilot, who also begrudged the time to go around the lake.

I knew the Chicago Field by heart and as the shore line drew near I made a fractional correction of my course and headed for the landing field with a feeling of exultation. I saw no contestant ship on the lines as I flashed over the hangars and down to the runway. Sweet victory was mine. For I was the first to land of the hurtling group and in the lead in elapsed time.

One after another the hardy pilots who had mastered the Alleghanies and fog that first lap of the day arrived until there were twelve, all dogged tired, but regardless of their position in the race determined to make up lost time on the morrow when the second leg of the contest would be run to Glendive, Montana.

Though tired, I worked on into the night on on my motor. Almost lovingly I made final adjustments on my aluminum and steel flying mate that had served me so faithfully throughout the day.

Too tired to even eat I hurried to a bed and

a few hours' sleep. The next start was at five in the morning, and begrudging the time it took to undress and then dress in the morning, I lay down and faded into the slumber of exhaustion.

All too soon the call came to rise and, aching in every bone, I looked out the window into the darkness.

I could hear the patter of rain.

Shivering at the prospect of the wet job of getting started on such a morning, I downed a cup of coffee and some rolls at a nearby restaurant, then rushed out to crowd in a waiting taxi with six other pilots, who were voicing their opinion of the race officials for running a race at that time of the year when the weather odds were so much against us.

On the way to the field the boys plied me

with questions as to how I was making such good time. I smiled and said I had a good motor and ship and a lot of luck, neglecting to add that victory on the Golden Coast meant the start I had striven so hard for, and was the great magnet that drew me on regardless of obstacles. I just had to win.

As we drew into the flying field I looked at my watch and wondered if the inky darkness of that moment would give way to the dawn before the time arrived to take off.

Trying as had the first day's part of the race been, I would welcome the advantage on this next leg of at least being able to see where I was going at the start.

The pilots were busily fussing around their ships, starting their motors and piling in baggage and passengers. Five o'clock came and the lined up ships were ready for the take-off. As I had been first to land, my starting order this morning was first. Any other time that would have been to my liking, but in the drizzling murk it only meant that I would start without the advantage of the nearing light that was only a few minutes off.

"Start on the dropping of the second flag," shouted the official starter.

Tensely I awaited the signal and when the flag dropped I was on my way.

As the wheels rolled across the puddles they threw up great clouds of muddy water until the sound of the motor indicated the leaving of the ground.

The course lay to the west and north on the first lap to St. Paul.

Now and then as I passed over the house tops of the sleeping citizens of Chicago's suburbs, the rain's intensity increased momentarily adding to the discomfort of the dark, cold flight.

As I bored on through darkness I envied them their warm beds.

When the open country was entered I sighed with relief at having passed the possibility of engine trouble while over the houses.

Streaks of daylight were now breaking through the mist and as the hills of Wisconsin appeared on the horizon I sat back in the cockpit to get as much rest as possible.

I wondered what new adventure the day had in store for me.

Mile after mile towards St. Paul with noth-

ing more than an occasional fog bank to break the monotony.

Today I must add to my lead in order that I might afford to lose a little time if necessary in the event of trouble, which might turn up during this second leg of the race.

Due to the terrific strain I had put the motor to on the first day I had started out from Chicago with the throttle held back a little, but looking back over my course I made out the form of an opponent miles to the rear, but still looming as a menace to my winning.

Reluctantly shoving the throttle wide open once more I fought to lose sight of the opposing ship.

The motor's roar was deafening and the ship vibrated to every thrust of its throbbing pistons.

Would it stand the strain?

Although the country I was now flying over was much rougher than it should be to afford a landing at any moment, still having conquered the Alleghanies as I had the day before I felt little concern over a possible landing with the exception that it might mean considerable delay or loss of the race.

As a last resort I could have set down on the side of the treeless hills and walked away from the wreck if the ship was damaged, but for a while at least I was to have no anxious moments.

The head winds of the day before still persisted and to avoid them as much as possible I hugged the ground, now and then rising a few feet to go over a hill or tree.

Low as I was flying my motor could be

easily heard by the occupants of the farm dwellings as I hurdled over them, now and then returning a greeting to the folks (with a wave of my hand) when they rushed out to wave from the doorstep.

Ahead lay a rolling pasture full of Jerseys and I wondered if they would stampede from the noise of the motor. To possibly avoid such an occurence I gained a little altitude and altered my course, but the damage had already been done. As I passed the herd I could easily distinguish an irate figure standing by an overturned milk bucket and pool of milk that had been upset by an excited bovine, and as I looked back the farmer continued to shake his fist at me, probably uttering Swiss cuss words, as this was in the Swiss dairying settlement of Wisconsin.

As I flew on I imagined the Switzer would have plenty of opportunity to run out of wrath before the last of the race contestants had flown on by, and the day's output of that herd would likely make better limburger than the Swiss delicacy.

While I shortened the distance to LaCross and the Mississippi I could see the sky was darkening and the sun which had shone with so much promise just a few moments ago was giving way to looming storm clouds.

Light drops of water began to sprinkle the windshield, followed shortly by a downpour, but as long as I could see and keep off the ground I was little worried. The night before I had plugged up the only possible place in the engine's hood which might have allowed the rain to reach the magneto. Bad as the

weather was I smiled a little. At least this was one time I had licked the elements.

Arriving over LaCross I swung out over the river which lay parallel for some distance to my course. The west wind pouring down at me over the high bluffs on the opposite shore gave me a short battle till I had gained enough altitude to go over the bluffs, after which I continued on a few hundred feet west of them and out of the influence of the down draft.

Air, like water, follows the contour of the ground, and flying into the wind towards a steep bluff or hill the flier usually, weather permitting, gains some altitude first or depends on using more power to surmount the down draft.

After passing over the bluffs I was faced with low hanging fog which forced me to just

skim the tree tops, but St. Paul was not far ahead and the country from there on for many miles would be just one big landing field, dotted here and there with lakes for which the Swede and Norwegian state is noted.

As I passed by Redwing, looking down on the highway entering that city, I observed the sheets of water that were deluging the pavement. Apparently I was just skimming the edge of a cloudburst, although for the past few moments I had not been experiencing much rain but only the deep low fog.

Shortly, however, the fog gave way to a downpour that continued to increase in intensity until the propellor seemed to be held back by a giant hand.

The water was no longer striking the windshield in drops but appeared as a solid stream.

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Winning of that battle was a matter of watching the altitude meter to keep from sinking to the ground.

Visibility was nil.

Further and further the hand of the altimeter moved over the dial towards zero despite my efforts to hold the few feet of altitude that I needed to clear any ground obstruction I might find in my path.

Seconds clicked by like hours as I battled on, hoping the nightmare would let up before it was too late.

I knew that cloudbursts such as this were usually local in their intensity, and as I had been battling for several minutes it surely had to let up in a few seconds, so I did not give up hope.

Then the apparent solid stream of water

turned to definite drops on the windshield as the meter read uncomfortably close to its goal of no altitude.

When I could again ignore the instruments and pierce the ether with my straining eyes I realized how close a race it had been.

The hills and trees were only, as it seemed, inches below me.

"Boy, that was hell," and I thanked my lucky star to have bested once more the elements.

As though this was nature's final attempt to down me, the rain ceased as abruptly as it had begun and the billowing clouds gave way to the warm beams of the sun.

Again able to relax my aching muscles and shrieking nerves, I looked up with a thankful heart to the blazing old Sol who seemed always a friend in need when darkness sought to overwhelm me.

The hills had given way to the rolling meadows and ahead lay the end of the first lap.

In a few seconds, down on the run-way I taxied to the fuel tanks, shouting orders to the mechanics. I stiffly stepped to the ground, again first in and fastest time.

"Billy, oh Billy." Startled at the voice and the sound of my name, I turned and there was my mother coming towards me! She had driven all night to see her boy come in. Weariness and crying nerves were forgotten for the few seconds as I held the tense form of my mother in my arms. Not a tear moistened her eyes as she told me how proud of me she was. Although the story of my trials of the day before had been relayed to her as I flew from

Chicago, she was a brave little mother and was holding back the flood of tears that would be loosened when I swept away on my mad flight.

"One minute to start," yelled the starter. "Get on the line."

"I'll pray for you, son. I know you'll win," my mother whispered as she kissed me with a prayer in her heart for my safety.

Into the cockpit and "Off, choke," I rasped, as the mechanic turned the propellor and primed the cylinders.

Then, "Contact," the mechanic shouted.

"Contact," and pulling with all his might that there would be no doubt of the motor's starting, the mechanic started the metal blade on its flashing whirl. "Ready. Ten seconds," said the starting official.

"Five seconds left."

Nervously I edged open the throttle, and when the flag was dropped the engine in unison roared instant response. As though the ship entered into the spirit of the grand take-off, it fairly leaped into the air and then back over the crowd regardless of the precious seconds that it took to dip the wing to my mother before I hove from view.

Circling around the thickly populated city to avoid risking a forced landing among the houses, I headed out over the level terrain. Not a cloud was on the horizon and with memory of my mother's "I know you'll win," I urged my motor to the last revolution, singing along now over a crystal lake and then low to the earth's bosom, thankful of the element's truce.

Fargo was the next stop, where I anticipated meeting an old friend who could be depended on to help gas up and start the motor when I was ready to leave.

All but seventy miles of the lap had been left behind, and Clack, Clack! Instantly I was all ears for the foreign note that had crept into my motor's exhaust.

Glancing at the tackometer I could see that the motor was slowing up.

"Damn, don't quit me now, old girl," I murmered, as if the motor was something human that would understand.

Slower and slower it turned, however, till a landing was soon in prospect.

Tuning my ear to the sound of the exhaust I tried to fathom the trouble so that repairs could be made instantly upon landing. When a conclusion as to the fault had been arrived at, I rummaged through my pockets for the tools I would need, meanwhile, looking for a good field to land on.

Sailing in over a hedge fence I brought the ship to the ground on a smooth meadow. Then out on the ground and up with the hood. Nervously I worked on the magneto, opening the points a little and then a few strokes of a fine file on them; I closed the hood and stepped to the cockpit to turn on the switch, throwing caution to the winds in not taking the time to put anything in front of the wheels to prevent the possibility of the ship's starting when the motor did.

As I reached up to the propellor to start it whirling, there came across my vision the

threatening opponent who had been so little behind me ever since the start of the first day.

Seconds lost now might never be regained.

The motor started with the first turn and I leapt to the controls.

Had I made the right repair?

Was my guess correct?

No time to find out now, so I forced the throttle to the limit, anxiously watching the tackometer to see if the motor speed would rise to normal.

As the ship leaped towards the high hedge at the far end of the meadow, I pleaded, "Come on, old girl," and the ship rose like a gull.

The motor again was singing a healthy note.

The miles seemed to drag under me as I drove my ship on and on into the stiff breeze

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to overtake the one plane that was now leading the way.

Wracking my brain for anything that would help cut down the distance, I looked above and there floated a lone cloud which might be called to my aid. The head wind on the ground was terrific and as I approached the shadow of the cloud as it drifted over the fences on the ground, I watched it closely to estimate the speed at which it was traveling. My heart quickened as I noted its high speed, and miracle of miracles, it was traveling in the same direction I was going.

Coming back on the controls I eagerly climbed to the same altitude as the cloud, and riding with the friendly wind I shrunk the distance between me and the ship ahead.

Fargo loomed up and still my opponent was

a short distance in the lead, still bucking the head winds and flying low, ignorant of my advantage at higher altitude.

One minute only separated us at the takeoff there, and neck and neck we raced till I again was riding high with the favorable wind and leaving the other ship far in the rear.

Strategy within the bounds of sportsmanship was equal to more power, and ever increasing my lead, I ground out the miles till the wind again shifted to an unfriendly direction and I dropped close to the ground once more.

Bismark was left behind before my opponent had landed there. The bad lands of western North Dakota were now under me, and as I reeled off mile after mile of flying over the great crags and broken country I was tempted

to gain altitude for safety's sake. However, I knew that I would lose speed in the higher head winds there, and as I penetrated farther and farther into the bad lands the impossibility of making a forced landing in this country from any altitude was brought home to me.

The ground had the appearance of having, some time in the dark ages, been stirred up in one great conglomeration and then left for the elements to cut deep fissures all over, rendering it still further useless to human beings.

As the minutes stretched into hours, the weariness of the morning had taken on the form of actual pain to me.

Would I never see Glendive?

It was no longer a battle against weather.

The sun was sinking nearer and nearer the horizon and I was fighting to keep awake.

Just to nod for a split second while flying low to the ground meant a crash into one of the deep crevices beneath me.

Almost eighteen hundred miles of hard flying with hardly any rest at the start, and a pitifully little rest en route, were beginning to exact their toll of my mind and body. Just to lay down for a few hours would have been like an eternity of paradise. However, if I had been inclined to stop it was impossible for there was no possibility of landing for miles.

Navigation was now a momentous problem.

My tired eyes could hardly see the notes on the pad strapped to my knee.

There was ever the danger of throwing to the four winds all the advantage of lead I had fought so long to gain.

Just one degree off my course would mean

many minutes delay in reaching that day's goal ----Glendive.

Glancing at my watch I estimated another half hour should bring the goal into sight.

The sweet purr of the motor was growing into a menace to my very life, lulling me to destruction with its sleep-inducing song. Dangerous as the situation was I worried more about keeping the course straight and true than anything else.

My arms were almost useless and the controls seemed weighted with lead.

Looking from side to side of the cockpit, at the same time trying to register new scenery on my fagged brain, I stayed off the overpowering desire to close my eyes.

Peering ahead I made out what might be a river.

I could not tell for sure whether it was this or a strip of fog. If it was the river, I knew I would be able to last till I reached it and Glendive, through which it ran.

Was it just a mirage or could it be that I was nearer to the goal than I had estimated?

As I leaned forward in the cockpit, straining ahead as though I would hurry the finish of the day's torture, I could make out the form of the river and there directly ahead of me was the big bend that lay, as I knew, just a few miles from the last stop of the night.

God was good to me to hurry the end of my misery even for a moment or two.

Then flashing full speed over the finish line on the field I turned and landed, caring little as to whether I made a smooth landing or not.

All I could think of was to cut the switch

and stop the accursed drone of the motor that had taken on the aspect of a million devils leaping at my throat.

Finishing my trip to the judge's stand, I cut the switch and made no move to get out till mechanics started pumping my hand, congratulating me for having again finished a second hard day, first in and still in the lead.

My mouth would not form the words to acknowledge their hearty greeting and their faces were just a blur. I was beyond caring what happened or had happened if I could just sleep.

"Here, Billy, take this," and a cup was thrust to my lips, pouring a firey liquid down my throat that nearly strangled me.

It might have been Montana moonshine, but whatever it was, it served to bring back for the while my ebbing strength.

Friendly hands helped me out of the cockpit and into a waiting car to be whisked to the hotel where I lay down to sleep for the remaining part of that day and until three the next morning.

Food was a second consideration.

I was too exhausted to eat, although my only food that day had been the sandwiches thrust into my hands at the control stations during the day's flight.

The hotel clerk obeying my strict orders to awaken me at three a. m., knocked on my door, and getting no response, opened it and walking over shook me gently at first and then roughly, but to no avail. Throwing a glass of water into my face, his efforts were finally rewarded with success and with a groan I

rubbed the sleep out of my eyes and set to the task of getting dressed.

Only four hours remained till the start of the race on the final leg of the journey, and my motor would need a lot of attention.

Breakfast was a matter of course, but I forced myself to eat so that I would have strength through the day.

At the flying field, as I tuned the motor, I wondered if my rapidly diminishing strength would carry me the seven hundred miles over the towering mountains to success.

Seven hours' sleep had helped a lot, but I knew I was in much worse condition than when at Chicago. However, I tried to reassure myself by the thought that yesterday's flight was nearly a thousand miles, while today there were only seven hundred, but when the start-

ing time had arrived and the flag had dropped for me, a tired man sat at the throttle of his ship.

Only the determination that had carried me on so many long hard years would see me through to victory.

My reluctance to carry a passenger who might have relieved me, as did the other contestants during the race from New York, had cost me heavily, but I had known the hazzards afforded in races such as this one, as well as the handicap of extra weight, so refused to take anyone with me.

Billings, Montana, was the first stop and now the ground was again gently rolling with many good landing spots along the route.

The opponent who had so closely trailed me on the whole race was still close behind, a shadow that persisted even when there was no sun.

I was still on the round at Billings waiting for the signal to start when my rival landed simultaneously with a strange ship that had more speed and power than the ships in the race. However, I was not interested in the stranger anymore than that it was a Montana ship.

As my rival drew up to be refueled I noted with surprise that he no longer had a passenger.

Wondering at this I took off on the dropping of the flag and headed towards the mountains and Missoula, the next stop. Then I had the uneasy feeling that my rival was letting me do the worrying as to the navigational problems and just following till I might be forced down, when he would go on to victory.

As this was evident I determined to lose my rival among the high mountains and clouds, which I proceeded to do. High peaks rose to the heavens and it would be very easy to lose some time in navigating around them.

A pilot familiar with the surrounding country would be able to save considerable time and I was sorry that I had not had occasion some time in the past to have flown this trip, and by so doing, remember some of the passes which would have saved many minutes of climbing over the lofty mountains. However, I consoled myself with the thought that my opponent was at the same disadvantage, so I continued on.

This lap was an extra long one and as the

hours wore on I again had to fight an ever increasing tendency to dose, though I knew there were still three or four hours of hard flying ahead of me. The weather was ideal and the steady drone of the motor continued to pound in my ears. If the note would just change a little it might help, and yet this could not be without pulling the throttle and losing speed.

Ten thousand devils now were pounding at my brain. The rainbow's end was so near and yet the few minutes lead I had been able to pile up over my opponent could be wiped out by just one little mistake. It was maddening.

Again I was throwing my head from side to side to keep awake. The last high peaks that were to be crossed before the Missoula stop were now in sight and as I finally roared over

them and to the valley below. I dove full power at the field, peering ahead to see if anyone preceded me. Could I believe my eyes?

Just taking off was the strange high powered ship I had seen at Billings and closely following was my shadowy opponent. I could not understand how I had lost the time. I had flown a straight course, over high mountains and yet my opponent had succeeded in diminishing my lead by all but four minutes and with only one hundred and seventy miles of the race to be run to the final goal----Spokane.

The two ships were now out of sight as I left the ground and desperately I fought to bring them into view.

The towering mountains rose on my course and I missed the top of them by inches in

order that I would lose the least possible time in climbing.

On and on and on, parched lips moving in the prayer for speed. Forty miles had been erased from the lap and the fiendish drone of the motor was again waging its relentless battle to lull my tired brain and body to sleep.

Side to side I rolled my aching head, and as the ship lurched now and then from the boiling air over some unfriendly peak, my tired muscles were hardly able to bring it back on to the course.

Little over a hundred miles and an hour's flying now separated me from victory if I could hold the four-minute lead still remaining till the finish line was crossed. There was still hope if I could only keep awake.

The last extreme high mountain range was

before me, and as it took over eight thousand feet of altitude to clear, I held back on the control for the long climb.

On the other side would be a pass if the correct course was held and no longer the necessity of flying so high and into head winds. As the intervening twenty miles of the valley slowly were being traversed, I pounded myarms against the side of the cockpit, and now and then against my aching head to revive my whirling brain. Looking down to the floor of the great valley I could see thousands of feet below. Tiny specks of houses and as I watched them they faded from view. Ah, how wonderful to be there with nothing to do but sleep, sleep, sleep, sleep.

Then the wind was howling through the window over my bed and jumping up to shut

out the gale, I tugged at the window, and as I did the house started to revolve around and around. Wild-eyed I clutched at the first thing I could for a hand-hold. The wind was screaming like loosened Hades.

"My God, I've fallen asleep!" Opening my eyes, I could see a whirling mass passing before my vision. Closer and closer it drew to me. I was in a tail spin. With supreme effort I raised my head from the side of the cockpit where it seemed to be held by an unseen hand. The velocity of the spinning ship was holding me. With all my remaining strength I jammed over the rudder with my foot and at the same time shoved the control stick forward and to the right and pulled the throttle to slow up the roaring motor. As the ship responded to the control, my head con-

tinued to reel. Automatically I pulled back on the control as the ship stopped its mad whirl and tried to get myself established in proper relation to the ground.

As my head cleared I opened the throttle once more and looked at the altimeter and then to the ground. Before falling asleep I had nearly enough altitude to cross the high range and now there was but three thousand feet showing on the meter. Nearly five thousand feet down in a spin and sound asleep! It would take a lot of time to gain back the altitude and although I knew I was licked, I was thankful that I was alive to still continue on in the hopes of taking second place.

The sleep was driven clear out of my head head now as I drove on towards Spokane. As I flew in over the field and landed I hoped no one would notice the tears that I just could not hold back, and as I taxied up to the judges' stand, I held my head low in the cockpit till all evidence had been wiped from my face.

Arriving at the judges' stand I was informed that I was winner of second place in the race and in addition would receive first lap money for nine of the ten laps of the contest.

Glad as this news was, I was too tired to do more than thank the judges, after which I moved on towards the waiting taxi in anticipation of getting to the hotel and to bed at the earliest possible moment. However, before I could leave I was stopped by a nearby group of fellow contestants and in reply to the question of what had delayed me, I said I had just lost a little time back in the valley. During this conversation I also learned that the big

ship I had noticed accompanying my opponent at all the stops of the day's race had led my rival over the shortest course to victory. Strategy had enabled him to cut down my lead, although it had not been necessary after my experience back in the valley.

Arriving at the hotel I managed to stay awake long enough to clean up a little, after which I slept without a move for many hours.

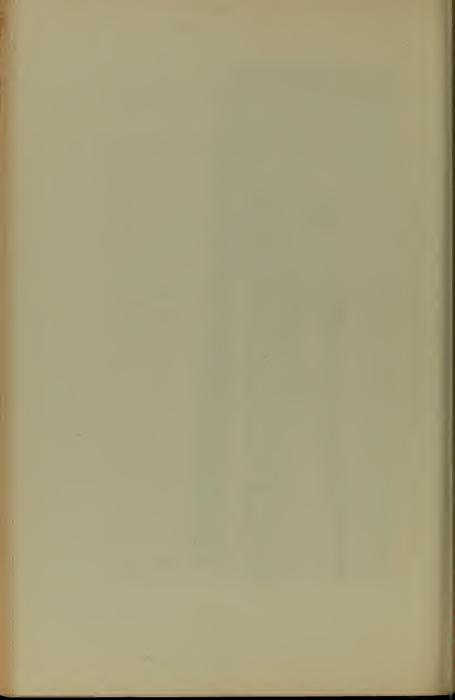
The sun was high in the heavens when I awoke the next morning and as I lay in bed just resting a little more, my thoughts turned to my plans which were now within reach of fulfillment. All through the years as I went from one experience to another I became more and more determined that should I ever attain the financial start I knew I would need, I would develop and give to aviation many im-

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provements that would mean the safeguarding of the lives of future fliers. As fog had been my greatest enemy, my mind naturally dwelt on the problem of whipping this great evil. Night after night I had lain sleepless planning the final accomplishment of an idea of which I was confident. Finance was the only remaining stumbling block to its success.



Collegiate Monoplane, 1929 Model



TEN

Back in my college days when I was teaching automobile and electrical engineering I had been deeply interested in wireless transmission of sound. As every new idea in mechanical science interested me beyond just being satisfied to know what was already known by others of the subject, I was a slave to experimenting with the unknown possibilities in wireless transmission of electricity. While carrying my experiments to the completion of what my associates called a fool contraption, I spent many sleepless nights figur-

ing out ways and means of saving just a little more of my meager funds to divert to the expense of the "fool contraption." This was prior to my interest in aeronautics.

When the machine was completed and the day at hand when it could be tried out I was alone when the first test was made for my associates had long been convinced that it could not work.

My work shop was in the rear of the school ground and adjacent to a boulevard on which pleasure seekers were in the habit of loafing along in their automobiles of an evening. On this particular night the hot sultry air had driven most every one fortunate enough to own a car to the boulevard to cool off. It was about nine-thirty when I, with grave misgivings,

threw the switch for the trial and waited for the result.

Part of the experiment was to run an electric motor by the power which would be transmitted from the machine to it without wire connections.

The motor did not budge.

Apparently months of labor and self-denial were of no avail—still the atmosphere seemed charged in the room. As I moved about I wondered if the tingling through my body could be caused by the machine.

"It must be my imagination," but I was not sure.

About ten-thirty, and an hour since I had set the device into motion my thoughts were interrupted by a knock on the door. Opening it I was confronted by an anxious motorist, who inquired if there was a garage in the neighborhood. My visitor went on to explain that his car was stopped and the engine could not be started.

Not only that, but there were a dozen other cars in the same block also stalled.

"Its darn funny. There we were just rolling along as smooth as silk and the motor died when we got up here. Everyone else says theirs did the same way."

Walking to the curb with the motorist, I viewed the array of stalled motor cars.

At that moment a thrill ran through my body.

Could it be possible?

Absurd!

It was unbelievable, and yet while I stood there another car rolled up and stalled before me. Its irate driver piled out, and raising the hood, tinkered with the motor for a moment or two but with no result.

By this time I was certain my wireless experiment was the cause of this phenomena.

But why? Something was wrong!

I hadn't expected the darn thing to work like this!

Dashing into the work shop I cut the switch shutting off my machine and fearfully went back to the street. If the engines of the many cars now stalled could be started I would have positive proof that I had caused the trouble.

"Try your motors now."

One doubting Thomas reluctantly stepped on the starter and with almost the first revolution of the flywheel his motor started.

"Well, I'll be d----d," he said.

One after the other the rest of the mystified drivers tried their motors, and with no trouble succeeded in bringing their motors back to life.

"My God, it was the wireless," and as the last car hove from view I thoughtfully made my way back to my workshop where I sat until the gathering dawn found me pondering over the result of my mad labors.

Bitterly I thought of the many hours of labor and ill-spent dollars thrown into the device only to finally achieve a freak that apparently had no further use than to cause mischief as it had the night before.

Perhaps later on there would be found some way to put my discovery into the service of mankind.

With considerable effort I determined to

shelve all thought of further experiment in this direction until I could better afford it.

After that the years rolled by for me as has already been told, still I was never able to forget.

Soon after the war, came reports of our army air service experiments in combating fog for the aviators. It seems they had discovered that by electrifying sand and dropping it into clouds from airplanes flying above they could cut wide swaths through the fog.

The theory was that fog was caused by minute globules of moisture clinging to tiny particles of dust which are ever present in the earth's atmosphere. Billions of such clusters of dust and water composed clouds or fog. Further, according to the theory, the clouds were charged with electricity which would be discharged when the electrified sand passed through them. As the globuels of moisture apparently obtained their ability to support themselves in the air through this electrical charge, the loss of it would cause them to no longer remain suspended and they would fall as rain. The air service experiments were apparently successful, but only limited areas could possibly be cleared in this manner.

Instantly upon hearing of this experiment, my mind flashed back to my own experiment. If electrified sand could do as was reported, then the sending of an electrical current into the clouds from my invention might cause the same result if the machine was more fully developed.

Some day when I had made my stake I would experiment again with the invention.

The thought grew until it was finally the driving force which sent me into and out of the many trying experiences of which I have told.

And now as I lay just resting a little more, almost as a child contemplating some momentous outing, I dreamed of what was now in my grasp.

Feverishly I worked on into the winter following the race, begrudging even the time to sleep that I might hurry to completion the experiment.

Finally when the stake I had worked so long and hard to accumulate had been invested almost to the last dollar, that which was to mean so much to aviation, if it was successful, was ready for the test out.

Only the organization who had agreed to buy the device if it succeeded knew of my invention. Selecting a day on which the fog conditions were at their worst I started the test. Ten landings were to be made on fields known to be covered with fog. Each stop had to be made on schedule, and at every field a representative of the company was stationed ready to report to headquarters if I arrived behind schedule. An adverse report from any one of them would mean the delay or possible failure of my plans.

As I took off on the first lap I threw in the switch and set into operation the N. P. ray. As if by magic the veil of fog was drawn aside for thousands of feet ahead of me. Setting the correct compass course toward the first field I climbed on up to a safe altitude, and cruising at half throttle, flew on hour after hour, now

and then experimenting by turning the ray down toward the ground.

Following the tunnel made by the ray through the fog, my eyes easily made out the fields below me. As the time arrived according to my instruments when I should be drawing near to the first stop, I swept the ray diagonally down until land marks came into view which indicated the nearing of my destination.

As easily as though the sun was shining its brightest I located the field and landed five minutes ahead of schedule. Landing after landing followed the first stop until I was again headed back to the starting place and fame. Darkness had now set in and I turned on my landing lights which were arranged to send

their powerful beams parallel to the N. P. ray.

An excited group awaited at the home field to acclaim the victor of the elements. After I had landed and while receiving the congratulations of my friends, I read the ten reports of the men who described my arrivals as I entered the fields on which they were stationed. They all read practically the same, but choosing one as an example its text was as follows:

"The fog was so thick that we had difficulty driving to the field, but when McDowell was almost due we could see his ship, through what appeared to be a tunnel through the fog, many miles away long before his motor could be heard. Strongly urge purchase of his invention at any price."

To dwell further on Billy McDowell's future

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would require an endless number of pages, so why write more? The pot of gold at the rainbow's end had been achieved.

THE END

